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CLINICAL SIGNIFICANCE OF ENDOMETRIOSIS*

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Endometriosis is now recognized as one of the most frequent causes of pelvic disease in women, as manifested by an ever increasing volume of clinical reports devoted to this condition.

The publication of the first of Sampson's classic articles on Endometriosis in 1921 intensified the investigation of this disease, particularly its histogenesis. Sampson's classical description of endometriosis as "the presence of ectopic tissue which possesses the histologic structure and function of the uterine mucosa" is generally accepted, and he includes the abnormal conditions which may result not only from the invasion of organs and other structures by this tissue, but also its relation to menstruation.

In a recent review of the literature on Endometriosis by Ware, he states that since Cullin's report on a case of adenomyosis of the uterus in 1895 and Russell's case of aberrant portions of Müllerian duct found in an ovary in 1897, an extensive investigation of this subject by many workers emphasizes the clinical importance of endometriosis as a cause of disability in the female, as well as the variability of the clinical manifestations of this disease, the location, symptomatology, relation to sterility and its treatment.

HISTOGENESIS

Endometriosis may be of two types: (1) the internal, or direct, in which the ectopic mucosa, situated within the uterine wall or tubal wall is continuous with the mucosa lining these organs; (2) the external, or indirect, endometriosis in which the ectopic mucosa has the same histologic structure as that of the internal type, but is not continuous with usually situated Müllerian mucosa. Internal endometriosis refers to adenomyosis of the uterus or the presence of endometrial glands within the muscular wall of the uterus, and connected with the lining endometrium.

There are several theories as to the origin of external endometriosis.

I. The Transtubal Implantation, or the retrograde menstruation, theory of Sampson, in which transtubal regurgitation of menstrual blood and endometrial particles implant and grow on the ovary and pelvic peritoneum. This theory, however, does not explain the presence of endometrial tissue found outside the pelvis or such remote sites as the lungs.

II. Theory of Embryonic, or Fetal Rests, advocated by Russell, in which the suggested origin of these glands was from cell rests of the Müllerian duct. Today, we find few advocates of this cell rest theory.

III. Theory of Metaplasia of Epithelium of the Pelvic Peritoneum, as suggested by Iwanoff and Meyer, and supported by Novak. Under some endocrine or inflammatory stimulus the peritoneal cells or germinal epithelium cells become differentiated and invaginated to resemble tubal or uterine mucosa, most likely the result of hyperestrinism.

IV. The Theory of Lymphatic and Vascular Dissemination, suggested by Halban in 1924, in which desquamated endometrial cells at the time of menstruation are disseminated by way of the lymphatics to various parts of the pelvis. Although this vascular and lymphatic theory has few supporters, it is the only theory that will adequately explain the presence of endometrial glands in lymph nodes and as metastatic tissue in the lungs.

According to Gardner, Greene and Ramsey, no single theory of histogenesis necessarily accounts for all cases of endometriosis, even though all cases of spontaneously occurring endometriosis in every known location can be explained by the celomic metaplasia theory.

PATHOLOGY

The pathology of endometriosis represents the result of the growth and activity of endometrial glands

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which have the same histologic structure and function as the glands of the uterine mucosa. The physiologic response of these misplaced glands to ovarian hormone stimulation causes cyclic bleeding and, with no avenue of escape, the blood accumulates as pelvic hematomata of varying sizes. Not only do adhesions form from the cyclic bleeding and healing process, but active invasion of the endometrial process into the walls of the involved organs occurs.

Although endometriosis has in the past been considered a benign disease, clinically and microscopically endometriosis appears to act like a cancer, though benign by microscopic criteria, it grows by direct extension, implantation and probably spreads by lymphatic and venous channels, as pointed out by Scott. He feels that external endometriosis has the same potential for malignant change as does normally located endometriosis. To substantiate this theory, Scott further pointed out that the literature contains 12 cases of ovarian carcinoma, which by conforming to Sampson's criteria, almost certainly arose from endometriosis.

As to the location of endometrial lesions, the involvement of the ovary is the most frequent, the utero-sacral ligaments the next, and the recto-vaginal septum the third most frequent site. The utero-vesical peritoneum and broad ligaments are also frequently involved.

The associated pelvic pathology in order of frequency are: (1) uterine myomas, (2) uterine retrodisplacement, (3) endometrial hyperplasia, (4) simple follicle cysts of the ovary, (5) post-operative adhesions, (6) luteum cysts of the ovary, and (7) chronic salpingitis. A recent case of the author's in a young white woman 22 years of age presented this entire list of associated pathology, with the exception of uterine myomas.

INCIDENCE

Endometriosis is a disease of young women of child-bearing age. Although it is usually considered as a disease occurring more frequently in women over 30 years of age, it is reported with increasing frequency in younger women. Greenblatt states that this condition is one of the most common pelvic lesions found at operation in women during active menstrual life and occurs more frequently in private practice than those in a general hospital population. Fallon in 1946 reported that in his 225 cases of external endometriosis, 4 per cent were under 20 years of age, and one of these patients was only 13 years of age. McDonald reported a case of endometrial cysts of the posterior vaginal vault in a girl of 16 years. Holmes reported an incidence of endometriosis in 2.5 per cent of his patients between the ages of 20 to 23, 8.7 per cent were under 28 years of age, while 51.2 per cent were between 29 and 39 years of age.

The clinical frequency of endometriosis, as encountered in gynecological practice, is now being stressed in modern medical literature. The true incidence of endometriosis is difficult to determine, but, as pointed out by Tyrone, this condition is increasing in the colored race. He found that the incidence was 5% on the gynecological service at Charity Hospital, as compared to 17% at the Ochsner Clinic the same year. Failure of conception during the younger married years because of economic reasons, maladjustment, increased tension of modern living, all of which lead to unsatisfactory sex life in many patients, have all been mentioned as contributing factors in delaying pregnancy, and therefore contributing to the development of endometriosis. Meigs found endometriosis in 32.2 per cent, Sampson 21.8 per cent, and Holmes 26 per cent of all abdominal gynecologic operations. On the basis of these figures, one may expect to find endometriosis in 1 out of every 4 patients operated upon for some pelvic pathology. Fallon states that there were 240 patients with microscopically verified endometriosis, as compared with only 114 with acute appendicitis. It should be emphasized that the variable clinical manifestation of this disease, and its widespread locations, demonstrates the necessity of constantly bearing this condition in mind when observing female patients during the child-bearing age. Endometriosis is encountered in many fields of medicine and not all of its symptoms are pelvic. As emphasized by Fallon in a review of 400 cases, the presenting symptoms were: upper abdominal, psychiatric, dermatologic, obstetric, urologic, and proctologic. The general practitioner is likely to encounter this disease as one of the most frequent causes of pelvic pain, dysmenorrhea, and/or sterility.

SYMPTOMATOLOGY

The symptoms of endometriosis are variable, depending upon its location and extent. In most cases the symptoms are chronic and are manifested by a month by month cumulative increase in some men-

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strual-linked phenomenon, usually, and most frequently, *pelvic pain*. It is generally considered that the cardinal symptoms of this disease are: (1) dysmenorrhea, (2) dyspareunia, (3) relative sterility, (4) menstrual defecation pain, and (5) the pathognomonic sign, the hard, fixed nodule felt by recto-vaginal palpation of the utero-sacral ligaments or peritoneum of the posterior vaginal vault. Of these diagnostic symptoms and signs, the fifth is the most important. When a definite nodule or cluster of nodules is palpated in the utero-sacral ligaments, with tenderness and induration, there is little doubt that pelvic endometriosis exists in most cases. As to the diagnostic significance of dysmenorrhea, most authors agree that this symptom alone is of no great significance, unless it is combined with positive palpatory findings, as previously described. It is generally agreed that there are many who make the presumptive diagnosis of endometriosis in many cases of severe dysmenorrhea, apparently overlooking the great frequency of uncomplicated primary dysmenorrhea.

Other symptoms frequently presented by these patients are, in addition to the above, menorrhagia, metrorrhagia, pelvic pressure, pain in thighs or inguinal regions, sacral back pain, gastro-intestinal symptoms, renal pain, upper abdominal reflex pain, constipation and obstipation, headache, nervousness, bladder symptoms, and elevation of temperature and leukocytosis.

Sterility is a common symptom or complication of endometriosis. The association of endometriosis and sterility has been emphasized by many observers, the incidence varying between 20 and 60%. Meigs states that endometriosis frequently causes infertility and that the general observation that ward and clinic patients rarely have endometriosis is based upon the fact that this group of patients are the ones that marry early and have children during early married life, have developed a secondary sterility due to a growing endometriosis. This seems to emphasize the importance of endometriosis in the production of relative sterility, both primary and secondary. Other clinical manifestations of this disease are now recognized.

Recently two significant papers on the effect of endometriosis on pregnancy have been published. Scott in 1944 reported two cases of endometriosis which necessitated laparotomy during pregnancy. Stone in 1937 reported a case of rupture of the pregnant uterus due to adenomyosis, and Sackett in 1948 reported a case of severe uterine hemorrhage due to adenomyosis which necessitated hysterectomy following cesarean section.

DIAGNOSIS

The importance of a careful history and thorough pelvic examination in the early diagnosis of endometriosis cannot be stressed too strongly. Combined rectal and pelvic palpation with inspection of the cervix and vagina are of great importance as a diagnostic procedure. Culdoscopy is of minor importance and indeed may be a dangerous procedure. The most frequently encountered lesions of pelvic endometriosis are the so-called "chocolate cysts", the "blue berry" spot, the endometriosis of the recto-vaginal septum and the utero-sacral ligaments. Fallon states, however, that less well known manifestations are as common as the above lesions, these being the thin plaques of an old-blood-like material densely adherent to the peritoneum, known as "brown spatter," and the "red roughening" consisting of fiery red granules with fibrin-like fronds. Less frequently, small colorless peritoneal cysts, white areas of peritoneal sclerosis or the small chocolate cysts of about 1 mm. are encountered.

As stated above, the clinical manifestations and location of this disease are variable. Fitzgerald and Kuhn recently reported a case of endometriosis of the bladder and a review of the 64 reported cases. The symptoms of bladder pain, frequency and urgency with or without hematuria, were all exaggerated during menstruation and in these cases, a palpable mass painful on pressure and a typical cystoscopic picture, were present. According to Siddall and Mack, most cervical endometriosis is secondary to involvement of the recto-vaginal septum and direct extensive into the cervix from the uterine corpus has never been reported. They report four cases of primary endometriosis of the cervix, which is rare, and they feel that the most likely origin of this lesion is the transplantation of endometrium to a traumatized cervix; in all cases a history of labor or cervical operation preceded the occurrence of this disease. Pain is not a prominent feature of cervical endometriosis, but abnormal bleeding is very frequent, and superficially it resembles closely carcinoma of the cervix. Differential diagnosis is readily made by microscopic examination of the tissue biopsy.

Endometriosis of the cecum is rare, but Masson

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and Conker reported 14 cases in which the cecum was involved. Right lower quadrant pain with nausea and vomiting result in a clinical picture similar to appendicitis, but the pain always occurs just prior to, or during the menstrual flow.

Endometriosis as a cause of intestinal obstruction was reported in 16 cases by McGuff. The symptom of abdominal pain occurred in all cases; constipation during the menstrual flow in 13 cases, abdominal distention in 10 cases; rectal pain, diarrhea and blood in the stools in 5 cases. The possibility of endometriosis as a cause of intestinal obstruction in women 30-50 years of age should be kept in mind, especially those with acquired dysmenorrhea, sterility, rectal or pelvic pain, and menstrual exacerbations of the symptoms of progressive intestinal obstruction.

Endometriosis of the perineum, either following perineal operations or episiotomies, has been reported by numerous authors. It may occur after operative or forceps deliveries, and Schmitz reported a case occurring in the episiotomy wound following spontaneous delivery. Lesions of endometriosis have been found in the abdominal wall, the inguinal glands and even in distant organs such as the lungs.

TREATMENT

Probably the most important factor in the treatment of endometriosis is its diagnosis in the early stages of the disease. The clinical treatment will depend upon the age of the patient, social and marital status, the type and severity of the symptoms, the patient's desire for children, and the extent of the lesions relative to both the genital and associated pelvic organs. As stated by Campbell and others, there has been no outstanding contribution to the treatment of endometriosis during recent years.

Treatment may be classified as medical, hormonal, surgical, or radiological, or a combination of these methods of therapy. All are agreed that the treatment of this condition should be as conservative as possible, except in those patients of the older age group with extensive pelvic involvement and severe disability. Endometriosis is not a life-endangering condition, and conservative medical measures will often suffice to control the less severe cases. However, it should be emphasized that endometriosis in the young woman of child-bearing age, especially those without children, bears a careful investigation into the possibilities, as well as the dangers, of conservative treatment. The treatment of endometriosis is simple when the indications are clear for arresting ovarian function, either by surgical castration, or by x-ray, or radium. The most difficult decisions arise, however, in those patients who are extremely anxious to retain the child bearing and menstrual functions. It is in this group that the policy of increasing conservatism has become manifest. A complete pre-operative discussion between the patient and the surgeon, of the problems involved and the possible surgery required, should be carried out in all cases.

The type of treatment used depends largely upon the choice of the physician and the status of the patient. In the opinion of Meigs, the treatment of endometriosis is surgical, and he feels that the surgical treatment of endometriosis has been satisfactory up to the present time. *A conservative surgical approach to this problem is now considered superior* to other types of treatment. Excision of the pelvic lesions without castration results in the improvement of the disease in many cases, although Fallon and others have reported a high recurrence rate of symptoms following excision without castration. Even when the surgeon feels quite sure that some ectopic endometrium will be left in the pelvis, and that a future second operation may become necessary, these patients will often agree to this approach, knowing that the possibility of future gestation is still maintained.

Many reports in the literature confirm the fact that, following conservative surgery in endometriosis, pregnancy often occurs. Ware has recently reported 13 private cases of endometriosis in whom pregancy followed, often within a few months after operation, and in four cases a second pregnancy. Scott and TeLinde report a follow-up of sixty-four patients with endometriosis in whom the child-bearing function was preserved at laparotomy. Of these patients 26 had 3 pregnancies, 20 patients had one or more term pregnancies, and 3 had abortions.

Gray reviewed a series of 250 cases of endometriosis treated by surgery, and he found that radical surgery was required in 37.2%, conservative surgery with hysterectomy in 21.6% and conservative surgery maintaining reproductive function in 41.2%. In the radical surgery group 79.6% were over the age of 35 years, and 51.6% had had one or more children. In the patients treated by conservative operation and hysterectomy, largely because of associated fibromyoma of the uterus, 70.4% were under 30 years of

age and subsequent pregnancy occurred for the first time in 33.8% of the married patients. Dysmenorrhea was present in 87.4%, retroversions of the uterus in 59.2%, and myomas of the uterus in 16.4%. Excision of the endometrial implants with suspension of the uterus was the most frequent type of conservative surgery employed.

Bacon reported a series of 214 patients treated by conservative pelvic surgery and, of these, 138 cases had the child-bearing function preserved. Thirty of these patients delivered a total of 39 children, the average interval between operation and delivery being 2.7 years. Sixty-eight, or 49.3%, were relieved of symptoms, 21% were partially relieved and 29.7% were failures, requiring later radical surgery or irradiation. *Irradiation alone* as the initial method of treatment, particularly in the younger age group, *should always be avoided.*

In the surgical treatment of endometriosis, many modifying conditions may have to be considered in addition to the patient's age, her social status, and her attitude toward future pregnancies. For example, a difficult problem will often be encountered in those cases in which one ovary may be conserved, yet the extensive involvement of the utero-sacral ligaments and the rectum with large nodules and with the rectum tightly adherent to the cervix, complete removal of the endometrial tissue is practically impossible. Each case, therefore, must be decided upon a purely individual basis, with consideration of all the personal and anatomic factors in each case. Certainly the principle of routine castration for endometriosis is absolutely disqualified in light of the excellent results of conservative surgery and the relative high incidence of post-operative gestation.

Karnaky, Bickers, and others have advocated the treatment of endometriosis by the use of stilbestrol in large doses, and over long periods of time. The rationale of this treatment is that stilbestrol produces its effect upon the endometriosis through pituitary inhibition. According to Siegler, prolonged and increased use of stilbestrol has been explained as having a suppressing effect on the anterior pituitary; thus inhibiting or diminishing ovarian activity and causing atrophy of the ovaries. This in turn reduces estrogenic stimulation to the normally placed or ectopic endomestriosis, with resulting amenorrhea. Small doses, even though continuously used, do not produce this effect. The same phenomenon probably occurs during pregnancy. To explain why, with stilbestrol therapy, endometrial lesions undergo atrophy while the intrauterine endometriosis undergoes hyperplasis, Greenblatt postulated that endometriosis may in most cases be derived from celomic epithelium or some other embryonic cells which are easily destroyed by large and continuous doses of estrogen. However, at present the mode of action of stilbestrol can only be conjectured, and its use should be continuously and judiciously individualized. However, this method of treatment is not widely accepted, due to the necessity of prolonged treatment, and to the fact that this method of therapy is purely palliative, and never curative.

Greenblatt and Suron have recently reported the use of testosterone by pellet implantation in alleviating the symptoms of endometriosis pre-operatively, and the control of residual or recurrent endometrial lesions following conservative surgery.

Hirst also reports satisfactory results with the use of androgens. 150 to 225 mgm. of testosterone proprionate in oil was injected intramuscularly over a period of two to three weeks, followed by 10 mgm. of methyl testosterone daily by mouth for variable periods.

Preston and Campbell reported a series of 187 private cases treated by oral methyl testosterone during the past 9 years, and they feel that androgea therapy definitely relieved the symptoms and caused a regression in the nodules of endometriosis, as well as over-coming the sterility and making less formidable any surgical treatment which followed hormonal treatment with androgens.

Many other authors have also attested to the merits and safety of androgen therapy, either orally or hypodermically, but all are agreed that androgenic hormone therapy has only a temporary action and will not cure endometriosis, similar to the results following estrogenic hormone therapy.

SUMMARY AND CONCLUSIONS

1. Endometriosis is now recognized as one of the most frequent causes of pelvic disease in the younger woman of child-bearing age.
2. The relationship of endometriosis to female sterility has been stressed.
3. The histogenesis, pathology, incidence, diagnosis, symptomatology, and treatment have been briefly reviewed.
4. Conservative surgical treatment, with preservation of the child-bearing function in young

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women and those without children, is advocated whenever possible.

5. Hormonal therapy of endometriosis is only palliative and not curative.

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511 Allied Arts Building.

Diet May Cure Delusions.

Correction of a deficient diet may cure the delusion of being parasitized by insects, it was reported in the (May 1st) Journal of the American Medical Association.

Four cases in which patients described bizarre habits of fictional parasites upon their bodies were discussed by Dr. Irma Aleshire, Iowa City, Iowa. All the patients suffered from pellagra, a deficiency disease, and all were cured of their delusions after institution of a proper, antipellagrous diet.

The patients believed the imaginary insects to cause burning, crawling, itching sensations to their skin. In attempts to alleviate the sensations, the patients scratched themselves until their skin bled, or dug small holes in their skin with their fingernails. They also washed their clothing and bedclothing daily, bathed themselves frequently, and applied various anti-insecticidal preparation to their bodies.

"It is significant that a history of poor eating habits was elicited on questioning the only patients with delusions of parasitosis whom I have seen in the past 11 years, and that correction of their eating habits cured their affliction," Dr. Aleshire stated.

"The fact that crawling sensations and burning pain as from the bite of an insect were present may have led the patients to the wrong assumption that such symptoms were due to the presence of insects. Fantastic irrationalization as to the nature and habits of the supposed parasites may be connected with the fact that the central nervous system is particularly vulnerable to malnutritive changes, as manifested in pellagra."

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PRIMARY MELANOMA OF THE ILEUM

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Richman and Lipsey[1] reported two cases of melanoma of the small intestine in 1951. They found records of 31 additional cases, but only ten of the 33 were primary in the intestine. Laidlaw,[2] also Herbert and Manges,[3] expressed doubt that melanomas can arise in the intestine. The following case, believed to be a primary melanoma of the ileum, is being reported because of its rarity.

CASE REPORT

A 60 year old white male was in good health until March, 1952, when he noted vague, intermittent, cramping pain in the epigastrium. Three months later he had chills and fever and severe generalized abdominal pain, with distention. Exploratory laparotomy was done elsewhere. A mass some 24 inches proximal to the ileo-cecal junction was found. A double barrel ileostomy was done as the patient's condition was grave. The ileostomy closed spontaneously some three weeks after operation, though fecal material continued to drain intermittently. Five months after the initial complaints, he sustained a severe attack of cramping abdominal pain, abdominal distention and increased fecal drainage from the ileostomy site. Initial examination at this hospital revealed a well developed, well nourished adult white male in acute distress and moderately dehydrated. The blood pressure was 120/60, the pulse 160, temperature 101.4°. The abdomen was distended, tympanitic and markedly tender in the right lower quadrant. A tender, ill-defined mass filled the right lower quadrant and extended just to the left of the midline of the lower abdomen.

Laboratory Data: The erythrocyte count was 4,200,000 per cu. mm. with 80% hemoglobin per 100/ml. The leucocyte count was 4,000 per cu. mm. with a "shift to the left". The urine was normal and a Kahn test on the blood was negative. Examination of the upright films of the abdomen revealed fluid levels in the small bowel and colon. A diagnosis of intestinal obstruction was made and a laparctomy performed. There was fibrinous peritonitis with marked agglutination between many loops of the small bowel. A large, necrotic, friable mass consisting of omentum and ileum was found just distal to the ileostomy. Frank pus was encountered while dissecting this free. The entire mass and the double ileostomy was resected and a primary ileo-ileal anastomosis was done.

Pathology Report: The gross specimen consisted of two portions of small bowel, measuring 50 cm. and 30 cm., respectively. These were dilated, edematous and had a pale velvety mucosa. There was hyperemia of the serosa with small areas of necrosis. The shorter segment contained a pearly grey, constricting, polypoid tumor which measured 6 x 11 cm. It had a necrotic, hemorrhagic center and extended into the serosa. No other tumor was seen in either of the two portions of the bowel, but there were foci of necrosis, hemorrhage and edema and many small areas of fibrino-purulent exudate on the serosa. Several firm lymph nodes, the largest measuring 3 cm. in diameter, were noted immediately adjacent to the growth. Some of these were partly replaced by metastatic tumor tissue.

Microscopy: Microscopic examination of random sections of the tumor in the ileum and the regional lymph nodes revealed extensive replacement by tumor cells growing in alveolar and medullary nests (Figure 1). The tumor cells varied considerably in morphology. Many had acidophilic cytoplasm, an annular or irregular nuclei and tumor giant cells were numerous (Figure 2). A finely granular, very light brown pigment was present in an occasional cell. This pigment was argyophilic and resembled melanin histochemically (Figure 3).

Interpretation: Malignant melanoma (primary

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Reviewed at the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the results of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

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in ileum) with metastases in the regional lymph nodes.

COMMENT

After the operation it was found that a mole was removed from the patient's chin by a barber some

Fig. 1. The ileum is invaded by nests of tumor cells which extend to the muscularis mucosae. Hematoxylin and eosin stain x 48. (Armed Forces Institute of Pathology negative 53-8504, Accession No. 548687.)

45 years previously. It is unlikely that this could have been the primary lesion, although Galgona[4] recently reported a case in which a patient survived 20 years after removal of a melanoma of the face.

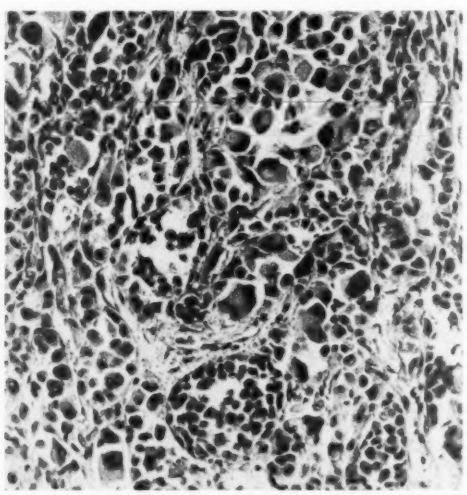

Fig. 2. Detail of cellular pattern with extensive variation in size and shape of the cells and their nuclei. Occasional multinucleated cells are seen. Hematoxylin and eosin x 200. (Armed Forces Institute of Pathology negative 53-8505, Accession No. 548687.)

Extensive metastases were found post-mortem in his case. This tumor morphologically and histochemically fulfills the criteria for the diagnosis of melanoma. We believe it is primary, because no other tumors could be demonstrated clinically or

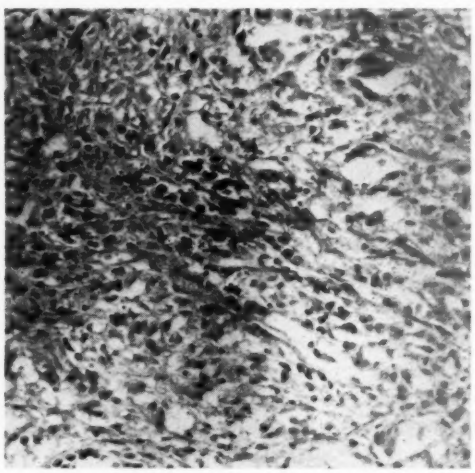

Fig. 3. The tumor cells contain granules which are argyrophilic. Fontana silver stain x 200. (Armed Forces Institute of Pathology negative No. 53-8506, Accession No. 548687.)

roentgenologically, despite careful search. The history indicating that a mole was removed 45 years ago, is not regarded as significant. If that had been the source of the primary, metastases should have appeared sooner and/or should have involved the regional lymph nodes, lungs, skin and liver, in addition to the single mass described clinically. It is interesting to note that nine out of the ten primary intestinal melanomas reported previously were found in men and all occurred in whites.[1]

SUMMARY

A case of primary melanoma of the ileum is reported. Attention is directed to the rarity of the lesion which occurs almost exclusively in white males.

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CLAVICULAR CHANGES ASSOCIATED WITH SECONDARY HYPERPARATHYROIDISM*

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Roentgen changes in the region of the acromio-clavicular joint in cases of hyperparathyroidism secondary to chronic renal insufficiency (renal rickets, renal osteodystrophy, osteonephropathy or renal osteitis fibrosa generalizata) have been described by various authors. These consist of cupping of the outer ends of the clavicles with fraying due to irregular absorption of the articular surface. Sometimes similar changes occur in the acromion process, with or without widening of the acromio-clavicular joint space. Recently, Nathanson and Slobodkin[9] stated that these findings on radiologic examination were a presumptive sign of hyperparathyroidism. They demonstrated these changes in two cases of osteonephropathy and one case of primary hyperparathyrodism.

A review of the literature in an attempt to determine the incidence of these clavicular changes in the acromio-clavicular joint revealed only twelve reports which mention these changes or present x-rays demonstrating them. Norman, Perlman, and Bostable[10], Cancellmo and Bromer[4], Miller and Sissons[8], and Herbert, Miller and Richardson[7], each report a case of osteonephropathy and Case 37401 of the Case Records of the Massachusetts General Hospital[5] is a report of proven hyperparathyrodism, describing changes at the acromio-clavicular joints and demonstrating them on x-ray examination. Herbert, *et al.*, also described the pathologic changes at post-mortem. Bass and Pakter[2] report clavicular changes, but do not present the x-ray films demonstrating them. Pugh[11] demonstrates the described changes in one case of hyperparathyrodism but makes no further comment about the findings in the text. In Smyth and Goldman's[12] report, an early chest x-ray examination demonstrates these changes, but a later film shows marked calcification of the soft tissues in this region which obscures the changes seen earlier. In the case of Renal Osteitis Fibrosa Cystica reported by Albright, Drake, and Sulkowitch[1], the x-ray film showed calcific masses in the region of the acromio-clavicular joints. Can we assume that this case went through the stage of cupping and fraying of the outer end of the clavicle just as did the case of Smyth and Goldman? There are nine cases in the literature of renal disease with secondary hyperparathyroidism and three cases of primary hyperparathyrodism which demonstrates the described changes at the acromio-clavicular joint regions.

We are reporting the following case of changes at the distal end of the clavicle which occurred as a result of secondary hyperparathyrodism.

CASE REPORT

C. H. (Reg. #322697), a 25 year old white male student, was first admitted to this hospital on June 22, 1948, with the chief complaints of mild right flank pain and urinary frequency. There was no radiation of pain or hematuria. There were no other systemic complaints.

The past history revealed that, at the age of fifteen, the patient had an episode of fever and malaise, at which time he was told that he had "pus in his urine". In June, 1944, he was inducted into the Army but was rejected for paratrooper training because of "albumin in my urine". He was hospitalized while in combat because of trench-foot. At this time, albuminuria was discovered, and eventually he received a medical discharge with the diagnosis of congenital absence of the right kidney and severe hydronephrosis of the left kidney.

Physical examination on this admission revealed a blood pressure of 140/70. The heart and lungs were

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normal. There was slight bilateral costovertebral angle tenderness.

The chest was normal on radiologic examination. Intravenous pyelography revealed irregular streaky calcifications in the right renal area, but the right renal shadow was not visualized. No function was noted on either side, ninety minutes after the injection of dye. Retrograde pyelography revealed a normal urinary tract on the left. On the right side, the ureter outlined normally. However, no pelvis or calices were seen. Mottled calcifications were seen just above the proximal end of the ureter.

The patient was discharged and readmitted on two subsequent occasions within six months for follow-up. He remained asymptomatic.

Physical examination revealed a blood pressure of 170/100 with normal pulse rate. The patient appeared chronically ill, ashen grey, and had periorbital edema. He was found to be anemic and acidotic for which he was treated with multiple transfusions and intravenous lactate solution. After some clinical improvement, he began to complain of pain in his legs and shoulders.

Roentgen examination at this time revealed the following: The chest was normal except for thinning and fraying of the external ends of the clavicles with increase of the acromio-clavicular joint spaces. Special studies of the shoulder region (Figs. 1 & 2) confirmed these findings and on the right, an oval 2.0 cms. long calcification lying above the joint space

Fig. 1. Right shoulder showing cupping and fraying of distal end of clavicle. Soft tissue calcification is noted above the acromio-clavicular joint.

The final admission to this hospital occurred two years and seven months after the initial admission. The patient complained of increasing lethargy, painless muscle twitching, mental confusion and "bad dreams". There were no gastro-intestinal, cardio-respiratory or genito-urinary symptoms.

in the soft tissues, was noted. The skull was normal. Calcification was seen in the popliteal vessels.

The possibility of secondary hyperparathyrodism was considered. The laboratory findings of decreased calcium (8.5 mgms./100 cc.) and increased phosphorus (16 mgms./100 cc.) were confirmatory evi-

Fig. 2. Left shoulder showing resorption of distal ends of clavicle without cupping and fraying.

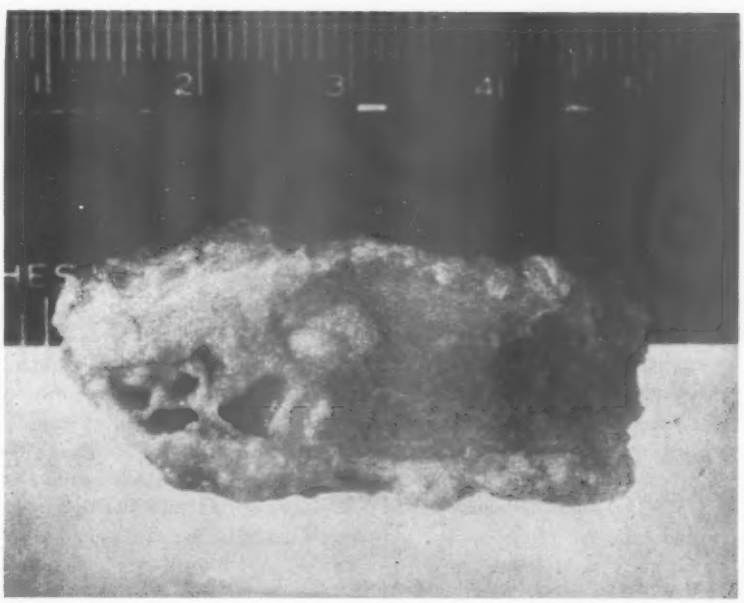

Fig. 3. Gross specimen of right clavicle showing cystic changes in distal end of clavicle. The cupping seen on x-ray is apparently due to bone resorption affecting the middle portion (medulla) of the end of the clavicle more than the margin (cortex).

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Fig. 4. Low power photomicrograph showing the distal ends of the resorbing trabeculae on the left. The fibrous replacement of the marrow can be seen adjacent to the cyst. One of the cysts lined by amorphous debris is seen on right (X 10).

dence of this diagnosis. The BUN and creatinine, which originally were 41 mgms./100 cc. and 7.3 mgms./100 cc., had increased to 170 and 8.6, respectively.

The patient improved further, as indicated by a lowering of the BUN and creatinine to 110 and 7.5, and elevation of the CO_2 combining power to near normal. He was allowed to go home on pass but returned in two weeks because of severe epistaxis. He was acidotic, and the respirations were of the Cheyne-Stokes type. He began to manifest signs of cardiac decompensation, pulmonary and peripheral edema. His course was progressively downhill. He developed oliguria and expired one month after return to hospital.

An autopsy was performed eight hours after death and the following findings were noted:

There was a rudimentary right kidney weighing 10 grams which preserved the gross contours of a normal organ. The pelvis was obliterated by calcific deposits. The ureter below the uretero-pelvic junction was patent. Microscopic examination revealed a hypoplastic organ with almost total absence of glomeruli. The left kidney weighed 100 grams and showed evidence of far advanced chronic pyelonephritis and moderate hydronephrosis. Marked metastatic calcification was noted in both kidneys. The lower urinary tract showed evidence of chronic cystitis and prostatitis.

In view of the previous radiological findings, the distal segment of the right clavicle, measuring 5 cms., was removed. The end of the clavicle (Fig. 3) was honeycombed by multiple small cavities averaging 0.8 cms. in diameter, apparently resulting from resorption of the central portion of the bone end. The cavities contained a yellowish-white, thick, semiliquid material which dried to a white, chalky substance. A thin fibrous membrane separated this area from the acromio-clavicular joint. An irregular deposit of calcification was seen in the soft tissues

Fig. 5. High power photomicrograph of distal end of one of the trabeculae with surrounding areolar tissue containing multinucleated osteoclasts (X 200).

superior and anterior to the joint.

Histologic examination of the distal end of the clavicle revealed multilocular cavitation of the bone. The cavities were lined by an amorphorus, granular basophilic deposit supported by a relatively acellular compressed areolar tissue (Fig. 4). The same type of connective tissue formed the septa between the loculations and replaced the usual marrow elements of the area. Some bony trabeculae were seen around the cavities. The ends of the trabeculae directed towards the cavities were frayed and eroded by numerous multinucleated osteoclasts (Fig. 5). Normal marrow elements were seen in the medial portion of the specimen some distance away from the cavities.

A deposit of delicate osteoid trabeculae surrounded by osteoblasts was seen beneath the periosteum. This compensatory process tapered off medially approximately at the level of the medial margin of the resorptive lesion.

Three parathyroids were recovered and appeared markedly enlarged, measuring 1.0 to 1.5 cms. in diameter. They showed a typical secondary hyperplasia of chief cells as described by Castleman and Mallory[6]. The adipose cells were completely crowded out. The chief cells were arranged mostly in solid sheets, but occasionally arrangement in cords and columns could be made out. There were also some microcystic changes and some papillation. The cells in the cords appeared usually cuboidal or low columnar. Where they appeared in solid sheets they assumed a polygonal shape (Fig. 6).

The heart was hypertrophic (450 grams) and showed evidence of fibrinous pericarditis.

The lungs revealed several areas of unresolved pneumonia and extensive metastatic calcification. The latter was manifested by dense elongated spicules embedded in the alveolar septa.

The gastro-intestinal system showed shallow esophageal erosions and confluent hemorrhagic acute colitis (uremic).

No lesions were found in the liver, gallbladder, pancreas, spleen, adrenals and thyroid.

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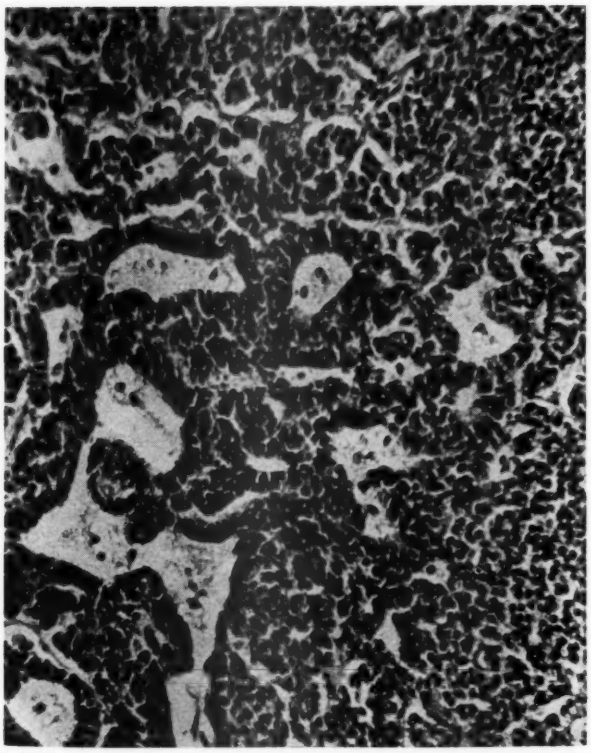

Fig. 6. High power photomicrograph of the parathyroid gland showing cords and sheets of chief cells on right. Microcystic changes with papillation is noted on the left side (X 200).

DISCUSSION

The cupping and fraying of the distal end of the clavicle has been demonstrated histologically. It is apparently due to a resorptive process causing pseudocystic changes in the bone adjacent to the joint space. This finding agrees with the work of Herbert, Miller, and Richardson[7]. The acromion was unaffected by the process and the acromio-clavicular joint space was not involved. The apparent increase in the joint space on x-ray appears to be due to bone resorption of the outer end of the clavicle.

Subperiosteal resorption of the bone noted most frequently along the margins of the middle phalanges of the hands, the medial aspect of the upper third of the tibia and occasionally the inferior aspect of the outer third of the clavicle has been noted by several authors. It was first described by Camp and Ochsner[3] in primary hyperparathyroidism and osteonephropathy. Pugh presents these changes as pathognomonic of these diseases.

The radiologic demonstration of the subperiosteal bone resorption of the inferior aspect of the outer third of the clavicle associated with cupping and fraying of the end is shown in Pugh's paper. Nathanson and Slobodkin, believe that the cupping and fraying of the distal end of the clavicle are pathognomonic of hyperparathyroidism and osteoneophropathy. The authors agree that the two signs are distinct and suggest that the process is the same in all sites. Its presence in all sites is not necessary for the diagnosis. Our patient showed the changes only at the outer end of the clavicles.

In all the diseases showing osteoporosis or demineralization that have to be differentiated from primary and secondary hyperparathyrodism, no case has been found in the literature which demonstrates the described changes at the acromio-clavicular joint region. Hence, it is suggested that in all cases of osteoporosis where the diagnosis is in doubt, x-rays of the shoulders should be studied as an aid in differential diagnosis.

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SUMMARY

1. A case of osteonephropathy with cupping and fraying of the outer ends of the clavicles, with post-mortem findings, is reported.

2. A review of the literature of cases of primary and secondary hyperparathyroidism demonstrating changes in the acromio-clavicular joint region is presented.

3. The changes of cupping and fraying of the outer ends of the clavicle, pathologically, are a resorptive process that affects the outer end of the clavicle with pseudo-cyst formation. This process may affect the acromion but was not demonstrated in the author's case. The joint space in unaffected.

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Sewing Needles in Man's Body.

An unusual case in which about 20 sewing needles were found in the body of a man who never complained of symptoms traceable to the needles was described by Dr. Clarence L. Miller, Washington, in the May 1st Journal of the American Medical Association.

The patient, 73 years of age, died in the U. S. Soldiers Home Hospital of a heart condition. A routine autopsy disclosed about 20 sewing needles scattered throughout the body—in the left side of the chest wall, in the left lower lobe of the lung, in the diaphragm, in the liver, and in the colon.

The needles were covered with rust and surrounded by a large amount of fibrous tissue. There were no eyes in any of the needles; all had rusted out. The needles apparently were ingested during the years the patient worked as an upholsterer and furniture maker.

XUM

RETROVERSION OF UTERUS*

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One of the most abused of all surgical-gynecological procedures is suspension of the retrodisplaced uterus, which in most instances is entirely asymptomatic. I refer to the operation as done as the primary procedure and see no objection to its use following abdominal myomectomies or conservatism in the treatment of endometriosis. Estimates as to the frequency of this condition are as numerous as there are types of operations or mechanical devices suggested for its correction. It is my firm belief that about twenty percent of all nulliparous patients have retrodisplacement, either retroversion-flexion or retrocession. In those patients who do not have this finding before childbirth, sixty-five to seventy percent will develop it after childbirth. This seems to occur in spite of good obstetric care and does not seem to be influenced by early ambulation of the postpartum patient.

The excellent article by Cave[1] following a questionnaire is worthy of review. The following question was asked:

"Would you please give a brief and concise opinion as to the indications, if any, for a suspension of the uterus?" The answers were in the main conservative and the majority felt that the operation had merit in certain gynecological conditions, but these were rare and no one group performed many suspensions. Many were very adamant in their opinion that there were no indications at all for the procedure. These are the conditions in which the majority felt that the operation was of value, although not all were agreed on some of the indications. For example, the question of sterility. A very few felt that when all other methods had been exhausted, there was the rare instance where its procedure had been used successfully. I personally feel that the operation is never indicated where a freely movable retrodisplaced uterus is associated with sterility. What constitutes an adherent uterus? Is it generalized, pelvic tenderness, or bimanual examination, or is the same tenderness elicited on rectovaginal examination? If the latter is absent, I do not think the uterus is adherent, even if it cannot be replaced.

As reported by Cave's investigation of two hospitals located in an urban community, the operation is extensively used whereas the questionnaire would seem to justify but few suspensory procedures.

Hospital A: A 303-bed institution has about 9,500 annual admission rate. In a four year period there were 291 uterine suspensions done. Two hundred and twenty-seven were done with an entrance diagnosis of uterine retroversion and 63 were found at surgery and corrected or done with other surgery (72.7 annually).

Hospital B: A 171-bed institution in the same community with an annual admission rate of about 6,000. In the same four year period there were 117 uterine suspensions done, or an average of 29.2 annually.

One excellent reply to the oft-time mentioned questionnaire is worthy of quotation: "Thirty years ago it was a common procedure. Now we do about one a year for endometriosis."

I must be frank and will be the first to admit that 10-15 years ago we frequently suspended the uterus usually as part of a general plastic repair. It is our feeling at this time that there is no place for this operation in conjunction with the repair of vaginal outlet relaxation. During the past three years there have been two suspensions done on our Service with retroversion of the uterus as the original diagnosis.

We often see the operation performed to correct a cystocele or urethrocele. Perhaps the only symptom which the patient has is "stress incontinence". The surgeon who thinks he can correct the distressing symptom by elevating the cervix uteri, is sadly mistaken. If he carries out this operative procedure, not only does he fail, but makes it more difficult for the gynecologist to correct at a later date the pathology which caused the initial symptom. Suffice it to say not only is it necessary to understand the anatomy of the female pelvis, but one must also try to visualize and interpret the symptoms which may arise from the disturbance of the normal anatomy. The proper

*Read before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953, as part of the Obstetrical and Gynecological Symposium.

choice of route is important in doing pelvic surgery in order to prevent prolapse of vaginal vault.

There is great doubt in my own mind that backache in the female is ever due to misplacement of the non-adherent uterus. If one could be positive that the retroversion is adherent, conceivably it could cause this symptom.

It is my firm belief that retroversion does not play any part in the production of spontaneous abortions. If both partners are thoroughly investigated, usually some cause will be found, although there is an occasional case which eludes us.

Conservatism should be stressed in dealing with the female pelvis, if we are to avoid starting many women on the way to pelvic invalidism.

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Periodic Medical Examination of Business Executives Urged.

The health of America's business executives is one of the country's greatest assets and should be protected by periodic medical examinations, it was stated in a recent Archives of Industrial Hygiene and Occupational Medicine, published by the American Medical Association.

Studies have disclosed that upon examination approximately 60 per cent of the business executives have one or more significant abnormality, many of them correctable, according to Dr. George M. Saunders, New York. Dr. Saunders is the medical director of the Socony-Vacuum Oil Company and co-chairman of the American Petroleum Institute, Medical Advisory Committee.

He pointed out that there are about 2,500,000 executives or managers among the country's 50,000,000 labor force, adding:

"The value of health programs to the individuals and to business is unquestioned. Better health means better morale, greater efficiency, and a longer useful life.

"During the last half century, America has grown from an agricultural country to the greatest industrial nation that the world has ever known. It seems obvious that the physical as well as the mental health of those responsible for directing our industrial machinery may have a profound effect on its success or failure."

There are special stresses and strains which are exerted on the executive and which demand peculiar qualities of resistance for survival, Dr. Saunders stated. As a result, executives are prone not only to the same health problems as the daily paid workers, but also to special problems caused by their positions.

"The intrinsic qualities which make men able executives, such as imagination and driving energy, are the very ones which may lead to disaster," he pointed out. "The ability, vision, imagination and driving energy required of an executive must be coupled with that essential serenity and balance that come with emotional maturity if the executive neurosis is to be avoided.

"Many who lack this emotional maturity are promoted beyond their depth. They may become overaggressive, tense, and anxiety-ridden, although this may not show on the surface, and a vicious spiral is started of anxiety, hostility, overactivity, and still more anxiety. And so round and round until suddenly something gives."

The most important feature of executive health programs is the system of careful, periodic health inventories which are made to assess the physiological and emotional condition with special reference to the demands of the job, according to Dr. Saunders. These inventories should be a part of any selection program for promotion. Thus, it may be possible to save a man from overpromotion, thereby protecting not only his health, but also the interest of the company and the stockholders.

Of the defects of function or structure that have been found in about 60 per cent of the business executives receiving periodic health examinations, the most prevalent were obesity, gastric distress, vision defects, high blood pressure, neuroses, anxiety and tension states, heart disease, and cancer. Forty per cent of the executives stated that they did not know such abnormal conditions existed, Dr. Saunders said.

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RUPTURE OF AN ANEURYSM OF THE CIRCLE OF WILLIS COMPLICATING PREGNANCY

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Pregnancy complicated by subarachnoid hemorrhage due to rupture of an aneurysm of the Circle of Willis is, according to the literature, not common.[1-9] Yet, the increasing number of cases reported during the past few years would make it seem that this clinical entity has become more recognizable through the improvement in arteriograms and diagnostic acumen. It is, therefore, possible that previously cases were occurring, but were not reported because of lack of recognition.

I wish to present a case which occurred on the fourth postpartum day and to highlight certain points which were common to this case and those of other authors.

Mrs. N. E. was a 35 year old white female, secundigravida and primipara, whose LMP was October 10, 1952 and whose EDC was July 17, 1953.

Her first child was delivered by me in 1947. At that time, her prenatal course was uneventful except for a secondary anemia which responded to oral hematinics. Labor lasted 15 hours and an 8 pound 9¼ ounce male child was delivered with ease by outlet forceps after a right medio-lateral episiotomy. The anesthesia used was N_2O and 0_2 plus pudendal block. The postpartum course was uneventful.

Eight months after delivery the patient complained of tiring easily, being emotionally upset and crying readily. She felt that everyone was against her. Her relations with her husband were strained, for the baby was "getting on his nerves". She was given "sympathetic understanding", mild sedatives and seemed to improve over the next few months.

She was not seen the following two years. In 1949 she came to the office with numerous complaints including tenderness of the vulva, soreness in hips, pelvic pressure and a "feeling of something dropping in pit of abdomen". She was quite nervous and emotionally labile. Again an examination revealed nothing remarkable and her symptoms were considered to be psychogenic in origin. Mild sedatives were given again. At this time, also, she voluntarily expressed a wish never to have any more children.

The patient was not seen again until April 27, 1953, at which time she was 28 weeks pregnant. Complete physical examination was not remarkable except for a mild secondary anemia and varicosities of the legs. The prenatal course was uneventful and on July 9, 1953, at the 39th week of gestation, she went into spontaneous labor. Labor lasted 10 hours 35 minutes. For analgesia she received 50 mgm. demerol and grs. 1/200 of scopalomine intravenously with good results. The second stage of labor was 13 minutes and delivery was spontaneous, after a right medio-lateral episiotomy. The baby was a female and weighed 6 pounds 1 ounce. Anesthesia was ethylene and oxygen. Blood pressure on admission was 110/70 and one hour postpartum it was 158/90. One ampoule of pitocin was given intramuscularly after the birth of the baby and 1 cc. of ergonovine was given intravenously after the placenta.

The postpartum course was uneventful and the patient was allowed out of bed on the first postpartum day. On the fourth postpartum day the lochia increased and she passed several clots. She was given ergotrate grs. 1/320 by mouth t.i.d. that day. That same evening during visiting hours she told her husband how well she felt and was looking forward to going home the following morning.

During the night, however, she suddenly developed a severe occipital headache which was followed by nausea and vomiting. She was given seconal 0/100 by an intern. The next morning she was noted to be extremely drowsy and slow to respond. Examination revealed nuchal rigidity, slightly hypertonic reflexes and questionable positive Kernig sign. A spinal tap was performed which was grossly bloody. Additional laboratory studies were as follows:

NPN	35.0 mgm/100cc blood
Spinal culture	Negative
Eagle Flocculation	Negative
Clot retractility	Normal
Coag. time (Lee-White)	8' 45"
Bleeding time	55"
Hemoglobin	12.5 Gms.
Hematocrit	40%
White blood count	11,200
Seg	85%
Band	1%
Lymph	14%

Four days later:

Hemoglobin	12.5 Gms.
Hematocrit	41%
Coag. Time (cap method)	1' 45"
Bleeding Time	50"
Platelets	180,000
White blood count	10,900
Seg	77%
Eos	1%
Lymph	22%
Urinalyses	Negative

Blood pressure taken at the onset of her symptoms was 120/70.

Immediate therapy was:

Ice cap to head
Vitamin C
Vitamin K
Sodium luminal
Demerol
Subcutaneous fluids—Ringer's Solution with Wydase

Her course and symptoms remained unchanged and on the sixth day following her subarachnoid hemorrhage an arteriogram was done and reported as follows:

"There is widening of the lumen of the right carotid artery just proximal to the origin of the arterior and middle cerebral arteries and just at the origin of the posterior communicating artery. This is consistent with aneurysmal widening." (Fig. 1)

On July 27, ligation of the right common carotid artery was performed under local anesthesia. There was no evidence of ischemia of the ipsolateral hemisphere on that occasion or subsequently. She was discharged ten days after the operation, relatively asymptomatic except for repeated headache.

The patient was seen two and three months postpartum, and except for some degree of anxiousness about herself, which is understandable, she seemed to have made a satisfactory recovery.

CONCLUSIONS

A review of the literature reveals certain salient features from which one may draw some helpful conclusions:

This complication of pregnancy has no special affinity for parity or age.

It has occurred with almost equal frequency dur-

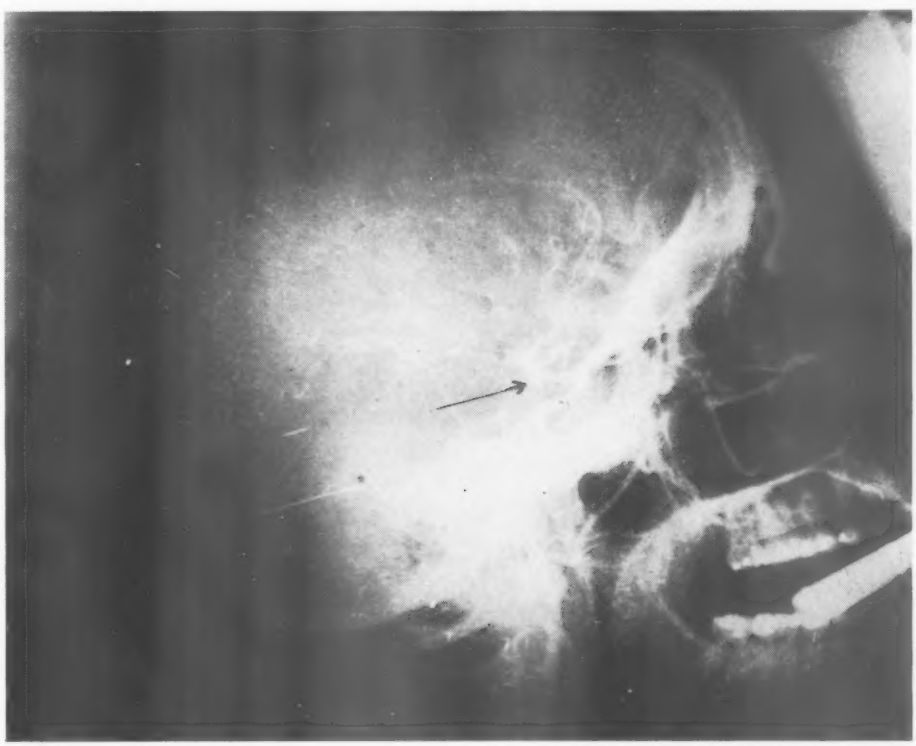

Fig. 1. Arrow points to aneurysm.

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ing the antepartum, intrapartum and postpartum periods.

Labor does not seem to cause an increase in the number of cases nor does it cause any difference in the mortality rate.

Elevated blood pressure is not a consistent finding.

Ruptured aneurysm does not seem to be an indication for Cesarean section. We say this with due respect for Conley's and Rand's[2] opinion to the contrary. In spite of 50% of their cases occurring prior to delivery, they still maintain that labor "could well serve to precipitate a hemorrhage in a patient with known vascular abnormality." In three cases[1,7] where sections were done within a few days of the subarachnoid hemorrhage, all three patients died. In Conley's and Rand's cases three sections were performed also: one was done immediately when the hemorrhage occurred during labor and the other two-three months after the hemorrhage. All survived.

Trodella[9] mentioned the possibility of oxytocics serving as precipitating factors in this complication. In our course, ergotrate by mouth was given during the day immediate to the hemorrhage. The cause and effect may be more apparent than real, and we do not think anyone would advocate the discontinued use of oxytocics on the possibility that a rare individual may develop subarachnoid hemorrhage.

The symptoms and signs are rather typical: sudden severe headache, nuchal rigidity, nausea with or without vomiting, normal or elevated blood pressure and a bloody spinal tap.

Immediate therapeutic measures should be instituted toward reducing cerebral irritability, reducing blood pressure if elevated, and increasing coagulability of the blood.

Arteriograms should be done to substantiate the diagnosis and to localize the aneurysm.

Accepted therapy at present is ligation of the ipsolateral common carotid artery.

According to Strohschein and Suzuka[8], a history of ruptured aneurysm of circle of Willis is no contraindication for future pregnancies—provided there are no residual symptoms. They cited one case, as did Conley and Rand[2], of uneventful delivery two years after rupture. However, they feel when residual symptoms persist, future pregnancies should be denied.

Mortality rate is approximately 50% during the first attack.

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PRURITUS OF THE VULVA*

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Pruritus of the vulva may reflect a local condition or a serious systemic illness; hence, is one of the most challenging gynecological symptoms. Time does not permit a discussion of all the conditions associated with itching of the vulva; however, a simple classificiation of the etiological factors should aid in this discussion. A workable classification might include the following:

I. Constitutional Causes
  A. Neurosis
  B. Circulatory changes
  C. Systemic disease
    1. Diabetes
    2. Uremia
    3. Exanthemata
    4. Blood dyscrasia
    5. Vitamin deficiencies
    7. Dermatitis medicamentosa (bromides, antibiotics, etc.)
    8. Psoriasis
II. Local Causes
  A. Acquired (fistulae)
  B. Malignant neoplasms
  C. Herpes
III. Infections
  A. Venereal
    1. Gonorrhoea (condylomata, Bartholinitis, Skeinitis)
    2. Chancroid
    3. Syphilis (condylomata lata)
    4. Venereal lymphogranuloma
    5. Granuloma inguinale
  B. Non-Venereal
    1. Mycotic
    2. True fungi, trichophytosis (ringworm), (tinea cruris), (dhobie itch)
    3. Pyogenic (Staph., Strep., B. coli)
    4. Trichomonas
IV. Parasitic
  A. Oxyuris (thread worm)
  B. Pediculosis pubis
  C. Scabies
V. Foreign Bodies (pessaries, small objects in children)
VI. Leucoplakia and kraurosis
VII. Essential pruritus vulvae

Consideration will be given to those causes of pruritus most frequently encountered by practicing physicians.

Pruritus secondary to diabetes is usually mycotic and characterized by the typical white deposit covering the vaginal surfaces. Favorable conditions for the growth of monilia are also present in the pregnant individual and constitute the most frequent cause of severe pruritus at this time. Control of the diabetes and treatment with 2% aqueous solution of gentian violet or proprion gel results in a prompt and satisfactory result. The pregnant patient may be controlled with treatment at irregular intervals; however, cure is rarely effected until after delivery. (Many advocate the prophylactic painting of the infants mouth with gentian when delivered.) Allergies require evaluation and treatment of the exciting agent. Locally, antihistamine cremes give prompt relief. Pruritus resulting from drug sensitivity requires cessation of administration of the drug and simple antipruritic remedies. Bromides and barbiturates are frequent offenders and all are familiar with the occasional fulminating vaginitis and severe pruritus following the use of aureomycin, penicillin, etc. Treatment for the latter and any fulminating acute reaction, regardless of the etiology, should be conservative and cautious. Local applications may be used of warm witch hazel compresses, sitz baths, soothing lotions such as C.Z.O., calamine, etc., and later local anesthetic ointments and cremes. Irritating soaps, toilet tissue, contraceptive cremes, certain types of clothing, and any other source of irritation must be removed.

Pruritus associated with venereal diseases subsides with proper treatment of the condition and requires only proper cleanliness and simple antipruritics.

The treatment for Trichomonas brings forth many suggestions and includes hypertonic salt solution for douching, devegan, floraquin and many other remedies. Eradication of the associated pyogenic infections must also be accomplished and the normal pH of the vagina restored.

Oxyuris is more often found in the younger age group, is readily diagnosed, and requires proper hygienic measures in addition to E.C., gentian violet tablets or other therapeutic agents.

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Pediculosis may be treated with mercury ointment, copper solution, etc.

Tinea responds to salicylic-benzoic acid preparations, but must be treated conservatively during the initial phase. Benzyl-benzoate in the form of an emulsion usually has been added to the usual sulphur treatment of scabies.

Leucoplakia and kraurosis designate atrophy, wrinkling and discoloration of the skin. Contraction and constriction signify kraurosis. The possibility of the development of carcinoma must be remembered; however, the treatment is primarily conservative. Relief of pruritus and discomfort and daily lubrication are the fundamentals of treatment. Vitamin A 30,000 to 50,000 units t.i.d. are helpful if hyperkeratosis is present. 10 gr. of ichthyol in one ounce of castor oil used locally each day is of value. A lotion of equal parts of 8% soda and glycerine may be used two or three times daily. Estrogens locally may have a place providing systemic effects are not allowed to become manifested.

As a final reminder, remember that leaking mineral oil is a frequent cause of pruritus ani and essential pruritus is a most difficult diagnosis; the husband may have trichomonads in the prostate; improper douching may do harm, and X-ray therapy is rarely indicated for pruritus vulvae.

Hormone Facial Creams.

The addition of hormones to facial creams does not result in any greater improvement in the appearance of the skin than would the continued use of an ordinary emollient cream, according to Dr. Howard T. Behrman, a New York dermatologist.

Dr. Behrman, a member of the American Medical Association's Committee on Cosmetics, based his conclusions on a study of 27 women between the ages of 35 and 65 years who, for a period of three months, applied a hormone cream to one side of their face and an ordinary facial cream to the other side each night before retiring. "No appreciable difference was visually observed in the side treated with an estrogenic hormone cream as compared with the side treated with either the identical base without hormones or a commercial night cream having a very similar composition to the hormone cream," Dr. Behrman wrote in the (May 8th) Journal of the American Medical Association. "In fact, the only change of significance observed on both sides of the face was encountered in the subjects with dry skins, namely, in subjects in whom the skin felt and appeared less dry if either cream was constantly employed.

"This study demonstrated that noticeable improvement in the appearance of the skin can be obtained through regular use of an emollient cream in women with dry skins. This study did not demonstrate that the addition of hormones to such emollient bases increased this improvement to any discernible extent."

"The cosmetic industry by and large has had a progessive and farsighted policy that has included more extensive laboratory studies and pretesting of new products, improved educational standards for its technical personnel, and a self-imposed policing of its manufacturing aspects.

"It is recognized and accepted that a certain amount of puffery is necessary in the field of promotional cosmetic advertising. However, some manufacturers of creams containing estrogens have made claims, either directly or by innuendo, that overstep these limits."

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CLINICOPATHOLOGICAL CONFERENCES
of
The Medical College of Virginia Hospital

Prepared and Edited by
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WM. R. KAY, M.D.**

Case #126

A 74 year old white female was admitted to M. C. V. Hospital with a chief complaint of pain in her chest of four hours' duration. The pain was substernal and described as dull and hard with radiation to both shoulders, down the arms, and into the fingers. The pain had begun shortly after a light lunch and was not associated with any unusual activity. The patient had previously had "indigestion" for several years and had not thought the present attack of pain was unusual until it persisted with radiation into the arms. Her local physician was called and administered morphine and atropine. The pain was not completely relieved and the patient was then sent to the hospital.

Her past history and systems review were essentially non-contributory.

Physical Examination: Temperature 97.4 (R), pulse 116, respirations 16, blood pressure 170/115. She was well developed, rather poorly nourished, and in no acute discomfort. The pupils were constricted and reacted sluggishly, and the fundi were not adequately visualized. The neck veins were mildly distended. The cardiac PMI was in the 5th left interspace just outside the mid-clavicular line. The rhythm was regular. P_2 was accentuated. No murmurs were noted. The remainder of the physical examination was essentially negative.

Laboratory Data: WBC 13,000 with 85% polys. Hemoglobin 14.6 grams. Sedimentation rate 31 mm./hr. Urinalysis: Specific gravity 1.035, albumin 1+, sugar 1+, acetone slightly positive; microscopic, many bacteria and amorphous material, 2-3 WBC and many epithelial cells. BUN 18 mgm.%. Serology negative.

An electrocardiogram revealed depressed ST segments in Leads I, AVL and AVR and elevated ST in Leads II, III, and AVF. Repeated tracings showed progression of these changes with development of nodal extrasystoles.

The patient was sedated and given oxygen. The next day her blood pressure had fallen to 90/60. She complained of nausea. A Grade I apical systolic murmur was noted. On the third hospital day the urine output became negligible. Following parenteral fluids the urine output gradually increased and was 810 ccs. on the fourth hospital day. The blood pressure remained around 90/60. The neck veins became increasingly more distended. The apical systolic murmur became loud and harsh and persisted. The patient became unresponsive. The skin became cold and moist. The blood pressure frequently was unobtainable. The pulse rate increased and became grossly irregular with a rate of around 92-100. The patient's course was progressively downhill. The BUN rose to 112 by the seventh hospital day and then fell to 48 by the tenth hospital day. On the ninth hospital day, the patient had two episodes of severe dyspnea with periods of respiratory arrest, and pulse dropping to 32 to 40 per minute during these episodes. The lungs, however, remained remarkably clear throughout. She developed mild sacral and ankle edema. The patient's temperature averaged around 102-103°. She continued downhill and died on the thirteenth hospital day.

CLINICAL DISCUSSION BY
DR. DAVID J. GREENBERG*

The history is that of a 74 year old white female with what is intimated to be the progressive onset of precordial pain with radiation to shoulders, arms, and fingers. The pain was so severe as to be only partially relieved by the administration of morphine and atropine but subsided within four hours. This type of pain was apparently not foreign to the patient (though the severity and radiation were) and had previously been labeled indigestion. Physical examination revealed hypothermia, tachycardia of 116,

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systolic and diastolic hypertension of 170/115, pupils affected by morphine, slight neck vein distention, slight cardiomegaly, and an accentuated P2. Laboratory data showed a WBC and CSR consistent with tissue injury and 1-plus glycosuria, probably as a reflection of stress as no evidence for diabetes developed. Transient glycosuria with cerebrovascular accidents and myocardial infarction as a manifestation of stress is a not uncommon finding and has led some observers to label it latent diabetes. As there is no suggestion of vomiting with subsequent dehydration and/or starvation, the 1-plus acetonuria might have been caused by a drug taken initially by the patient for indigestion. Salycilates, for example, will give a false positive test for acetone. Urinalysis is important in that good concentrating ability was present and probably rules out intrinsic renal disease of any importance. Proteinuria and glycosuria will increase the specific gravity, especially the latter, so the true specific gravity is probably 1.030. At such a high concentration, this is of no importance but is sometimes of value in interpreting tests of concentrating ability. No hematuria was noted, and serology was negative. An initial electrocardiogram revealed the early changes of an acute posterior myocardial infarction, i.e., elevated ST II, III, and AVF, and depressed ST segments in I, AVL, and the right precordial leads. Three days later, Q-waves of posterior infarction evolved as did 1-degree ht. block, evidence of a conduction disturbance in the right bundle, and occasional nodal premature contractions.

On the following day, the blood pressure had fallen to 90/60, and a grade I apical systolic murmur appeared. Thereafter, the murmur became harsh and loud; state of shock and reversable renal insufficiency wavered; and the patient expired after running a temperature of 102-103 but only after early signs of right heart failure and remarkable absence of pulmonary congestion. There were two episodes of severe dyspnea with periods of respiratory arrest during which a bradycardia of 32-40 was noted. As nodal premature contractions were present, this might have been nodal rhythm; although with this, the rate is usually 40-50. At any rate, at these times, an already diminished cardiac output that had previously been compensated by a tachycardia was further comprised with resultant severe cerebral anoxia.

There is nothing inconsistant with the diagnosis of myocardial infarction even before the electrocardiogram. Pain such as this lasting even one-half hour is myocardial infarction until proved otherwise. And a loud P2 in spite of systemic hypertension, together with venous distention, indicates that the heart has had a severe strain and is at least threatening to fail. The past history, too, makes one think of coronary artery disease. I will stress this more later.

Myocardial infarction is a pathological state—the end result of marked inadequacy of coronary blood flow. It typically occurs at rest, as there is usually the sudden occlusion of a coronary vessel. Infarction can occur without a sudden stoppage when increased demands of the myocardium overtax the collateral circulation that follows a former occlusion. Such a situation probably explains those cases that do occur after marked effort. This case taken as a whole suggests an acute occlusion, the importance of which I will discuss later.

Approximately 95% of occlusions are on an atherosclerotic basis. However, several of the rarer causes are suggested by this protocol and should be ruled out.

A dissecting aneurysm may rarely occlude a coronary artery by extension and hematoma formation or distortion of coronary ostia. The pain of the dissection itself is usually a sudden, severe, tearing precordial or restrosternal pain that radiates more widely than the pain of infarction—i.e., to head, back, epigastrium, or legs, depending upon the course of dissection. While hypertension is commonly present in both conditions, it is rarely absent with a dissecting aneurysm. Sustained blood pressure is more common after a dissection but in coronary occlusion of the usual type may fall after hours or days, although an initial fall is usually noted. A murmur can also follow the dissection because of damage to the aortic ring and cusps. This murmur is aortic in position and diastolic in time. Again, renal insufficiency may follow because of interference with renal arterial flow. Hematuria, however, usually present, and insufficiency is not as liable as the pre-renal type with which we are dealing in this case.

One thinks of subacute bacterial endocarditis in view of a developing murmur and the febrile course. Embolic coronary occlusion can occur from disease of the aortic valve and even more rarely from the mitral valve on an underlying rheumatic and/or

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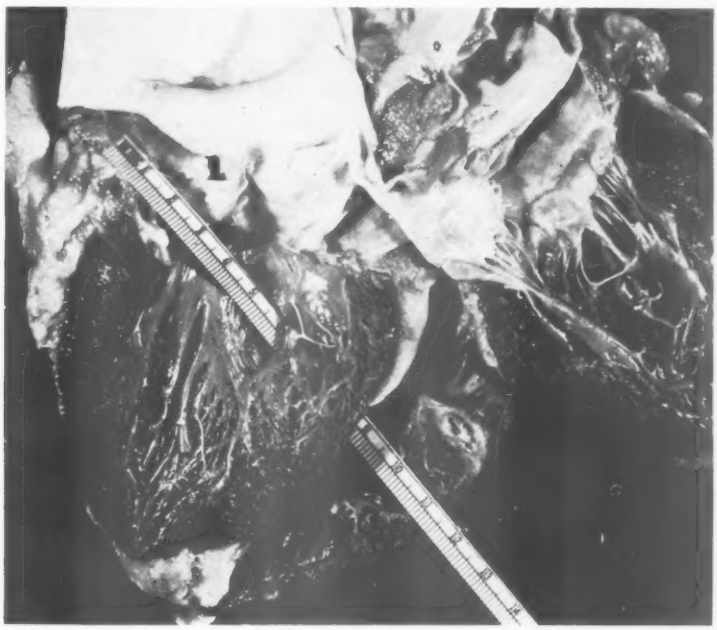
luetic basis. There is no real evidence for this diagnosis. The patient was in good health prior to the present illness and no other embolic phenomena were noted.

Bland thrombi forming on luetic aortic lesions with subsequent coronary embolization come to mind. They usually occur in young people, are an immediate cause of death, and as with other types of cardiovascular lues are accompanied by positive serology in approximately 80% of cases.



Perforation of the interventricular septum following myocardial infarction. Ruler passes through defect.

Bland blood thrombi which form on aortic atherosclerotic plaques and embolize to the coronary arteries are a distinct possibility in this case. They might be ruled out only by the rarity with which they occur.

Finally, polyarteritis, Buerger's disease, and cardiac tumors are mentioned only because their absence in mind precludes the chance of ever making such a diagnosis.

Let us assume then that a sudden occlusion has occurred on an atherosclerotic basis.

Why does a patient who was apparently doing even better than expected suddenly take a course for the worse on the day following infarction? This is rather early for complications such as pulmonary embolization. Extension of infarction and/or neurogenic mechanisms might explain the state of shock. Neither arrhythmia nor tachycardia are apparently present when the patient's course suddenly worsens. The most significant finding is the first appearance of an apical systolic murmur. This might represent left ventricular dilatation, but it becomes loud and harsh. This first appearance or the accentuation of a previously existing murmur in a patient with a recent myocardial infarction suggests two conditions—a ruptured papillary muscle or spontaneous cardiac rupture. The sudden onset or change of a murmur may also follow ruptured valves and chorda tendineae, but these conditions rarely if ever occur following myocardial infarction.

Rupture of a papillary muscle usually follows infarction, though it can occur with severe coronary insufficiency and so-called subendocardial infarction alone. The subendocardium in general and papillary muscles in particular are the true end-organs of the coronary arteries and feel inadequacy first. The murmur that follows rupture is quite consistent with that described in the protocol—is harsh, loud and apical. At times, sounds mimicking a friction rub are heard and occasionally there is an accompanying

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diastolic murmur. Cases have been reported in which no murmur was heard, but the rapidity with which death ensues probably explains why most are not heard. Acute pulmonary edema usually follows rapidly and death occurs in a matter of hours or days. Patients have survived for several months. No thrill has ever been reported in a case of a ruptured papillary muscle. It has been reported in only one case of incomplete rupture and was attributed to eddies set up by remaining strands of tissue. This is a most important point, and I should like to ask if any mention of a thrill was made in the hospital record.

Finally, spontaneous cardiac rupture is a distinct entity to be considered.

To begin with, spontaneous cardiac rupture occurs either through the ventricles into the pericardium, through the interventricular septum, and very rarely through the auricles. Such a catastrophe might be considered in this patient even before the second hospital day when her course indicated the dramatic occurrance of a tragic event. Pathological and clinical profiles have recently been stressed by Wessler, Zoll, and Schlesinger[1] after a study using the lead agar injection technique. Ruptured hearts were compared with acutely infarcted hearts coming to postmortem examination for other reason. The pathological requirements were the following:

1. A fresh coronary occlusion. This was touched on previously.

2. A recent myocardial infarction, certainly not lacking here.

3. A myocardial infarction which is transmural. The present case is consistent with such a picture. Laboratory data shows a moderate response to tissue injury and there is the electrocardiogram appearance of Q-waves. We usually feel that a pericardial rub indicates transmural infarction, but this is present in only approximately 25% of cases to begin with. And incidentally, it has been felt in some circles that the formation of pericardial exudate might protect the heart from rupture. There is apparently no evidence for this.

4. A myocardial infarction which is poorly supplied by collateral vessels.

5. A myocardial infarction which fibrosis is absent in at least one area.

The clinical predisposition includes usually a state of preexisting hypertension that is maintained after infarction, no previous history of myocardial infarction or congestive heart failure, and occasionally a history of marked effort prior to rupture. Age is significant only in that hypertension is more frequent with advancing years, and sex is important in that women are more likely to show the combination of hypertension and lesser degrees of damage to the coronary arteries. Fever and leucocytosis are not important in this series although it has been suggested by other authors that the proteolitic effect of degenerating white blood cells might play a part. Because those patients who died without rupture usually showed some other major complication as opposed to this group in which this one major complication was lethal, I wonder whether this is not at least an important relative factor.

Interestingly enough, the presence of angina had no bearing nor did cardiac size or electrocardiographic findings. However, I will individualize on this patient. Why some individuals suffer anginal pain only after eating is not quite clear. This woman's state of nourishment does not suggest eating as her most strenous activity. Distention of abdominal viscera might have provoked reflex coronary vascconstriction, and the latter might be the most important factor in the production of angina in this particular person; for I do not anticipate marked atherosclerotic changes in the coronary arteries while moderate enlargement of the heart probably is present. These factors, when present together, rather than a significant amount of vasoconstriction, might produce angina as we usually know it. Marked coronary atherosclercsis and anemia have been found to be the most important provocations of collateral circulation and fibrous tissue formation. I should not like to see a great deal of fibrous tissue in this heart.

Now what application and meaning can we learn from this? First of all, spontaneous cardiac rupture does not occur in badly damaged hearts because of the protecting influence of fibrous tissue. Our history includes none of the factors indicative of manifest cardiac damage, such as failure, previous myocardial infarction, or electrocardiographic changes not of an acute nature. And secondly, factors producing either a continual or intermittent increase in left ventricular pressure operating on a suitable pathological basis make the likelihood of spontaneous cardiac rupture nct remote. Indeed, 7-9% of people dying after myocardial infarction show a ruptured myocardium, either into the pericardial cavity or

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through the interventricular septum. We are all familiar with the high incidence of rupture reported from coroners' cases and from mental institutions. In such cases, the difficulty of diagnosis and/or the lack of appreciation of pain make the incidence of rupture exceedingly high. Therefore, even in these days of bed-chair coronary treatment and consciousness of early ambulation, no exertion should be allowed for at least three weeks. Mallory, White and Salcedo-Salgar[2] have demonstrated that a substantial scar begins to form in this time. While rupture usually occurs between the fourth and eleventh days, it may occur the first day and may occur after the third week. In the latter case, one can assume an extension of infarction. And because these patients are the ones who look best, less vigilance might be paid, whereas in reality it should be even more strictly inforced.

Now, where did this heart rupture? Unless one is fortunate or unfortunate encugh to be listening to the heart, a rupture into the pericardium is usually diagnosed on the autopsy table. Rarely, if bloodclot seals the tear, the patient may live for hours or days. However, there is no murmur. Recently, several clinical reports have stressed the occurrence of blood in the pericardial cavity that came from the granulation tissue of healing pericarditis while the patient was under the influence of dicoumarol. Varying degrees of tamponade resulted.

The murmur of interventricular rupture is not unlike that of the Roger's murmur. It is a harsh, loud systolic murmur usually of maximal intensity in the fourth and fifth intercostal spaces to the left of the sternum, widely transmitted, and accompanied by a systolic thrill in 50% of cases. As previously mentioned, the thrill is so characteristically absent in a ruptured papillary muscle that its presence is virtually diagnostic of the former. With a large defect, a diastolic murmur may be present but has usually been ascribed to the formation of a ventricular aneurysm. The murmur in this case is statistically more characteristic of a ruptured papillary muscle, but the murmur of a ruptured septum is at times best heard at the apex and even more rarely at the base.

Of greater importance, however, when rupture of the interventricular septum occurs, a rather distinctive clinical picture appears. The key to the correct diagnosis is the course. The condition of the patient worsens, but death does not usually ensue as quickly as it does after papillary muscle rupture or rupture through a ventricle. Few patients live longer than one month, but survival has been reported of almost five years. And acute pulmonary edema does not usually occur. Indeed, as in the present case, right-sided failure usually ensues. The occurrence of right-sided failure after first infarction is rare at such an early stage and usually follows failure of the left ventricle. Those hearts that show a predominance of right-sided failure already have advanced disease of the right ventricle. The lungs in this case have remained remarkably clear. Now why the right heart fails so quickly after rupture of the septum has been attributed to various factors. The sudden imposition of unusual strain late in life on an aging right ventricle might be the answer. In longer survival than occurred in this case, septal bulging with a Bernheim-like syndrome has been suggested. Another very interesting concept concerns the six well-defined muscles of the heart. Apparently the deep sinospiral muscle contributes 75% of the muscle substance of the right ventricle. Since it can be injured to a state of incapacity even in the left ventricle and interventricular septum, this might play a part.

In conclusion, I feel that the immediate cause of death is either a ruptured papillary muscle or interventricular septum. The murmur is inconclusive. Because the patient fulfills the pathological and clinical criteria for rupture of the heart and dies not suddenly but in approximately ten days of predominantly right ventricular failure, I favor the latter.

My diagnoses are, therefore, the following:

1. Hypertensive and arteriosclerotic heart disease with moderate cardiomegaly and not far advanced coronary atherosclerosis.
2. Acute coronary occlusion with myocardial infarction.
3. Rupture of the interventricular septum.
4. Stigmata of congestive failure of the right side.
5. Benign nephrosclerosis.
6. ? Hypostatic pneumonia and pulmonary emboli with infarction.

Clinical diagnosis: Coronary occlusion with myocardial infarction and rupture of the interventricular septum.

Anatomical diagnosis: Myocardial infarction of posterior interventricular septum with rupture of the septum.

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PATHOLOGICAL DISCUSSION BY DR. GORDON HENNIGAR

The body was that of an elderly white female, showing no outstanding features on external examination. The neck veins were distended, and the veins over the chest and arms were prominent. Cyanosis was absent.

The right pleural cavity contained 650 ccs of clear, dark yellow fluid, while the left cavity contained 500 cc. of similar fluid. The pericardial fluid was normal in quantity but sanguineous in color.

The heart weighed 275 grams and showed a moderate amount of adipose tissue in the epicardium. Numerous subepicardial hemorrhages were seen, most extensive over the lower portion of the right atrium and the upper area of the right ventricle, extending lateral posteriorly to lateral anteriorly. The left ventricle appeared slightly dilated. On sectioning of the heart, the left ventricular myocardium measured up to 1.5 cm. in thickness, while the right ventricular myocardium measured up to 0.2 cm. The myocardium of the anterior wall of the left ventricle, the posterior 2 cms. of the interventricular septum and the previously described areas of the right atrium and ventricle showing hemorrhages in the epicardium, showed mottled yellow to brown discoloration. Microscopic sections through these areas showed hemorrhage, necrosis, leukocytic infiltration, increase in fibrous tissue and hemosiderin laden histiocytes. The myocardium in these areas showed infarction of almost the entire thickness of the myocardium. An oval shaped defect of the upper interventricular septum was present measuring up to 1.5 cm. in diameter and oriented to the longitudinal direction of the septum. (Figure I.) The defect had a rolled, rough granular margin and opened into the right ventricular cavity 2 cm. below the tricuspid valve. Section through the margin of this defect showed infarction of tissue compatible with the clinical duration of the precordial murmur and marked venous distention. The margin showed necrotic muscle, moderate infiltration by polymorph leukocytes, occasional lymphocytes, pigment laden macrophages, and as yet no infiltration by eosinophils or evidence of removal of necrotic tissue with formation of cicatrix.

Extensive mural thrombi were present over the areas of infarction in the right atrium and ventricle, and those thrombi showed early organization microscopically. The right coronary artery was the seat of marked atherosclerosis, and thrombosis was present over subintimal hemorrhage causing complete occlusion of the artery. The left coronary artery showed no occlusion or thrombosis of the vessel.

Evidence of cardiac failure and increased venous pressure proximal to the right atrium were present in the other organs of the body both grossly and microscopically, as evidenced by moderate pulmonary edema and central lobular atrophy and congestion of the liver.

FINAL ANATOMICAL DIAGNOSIS

Infarction (recent) of posterior interventricular septum with rupture of septum. Infarction (recent) of right atrium and ventricle, with mural thrombi. Thrombosis of right coronary artery with hemorrhage into an atheromatous plaque. Acute congestion of lungs and liver. Bilateral pleural effusion. Generalized arterio-arteriolosclerosis, moderately severe.

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MEDICO-LEGAL NOTES

Heat Reaction States*

Twenty-eight deaths due to heat stroke were reported by medical examiners in Virginia during the years 1952 and 1953. With the onset of what some climatologists predict will be another severe summer, a discussion of the medico-legal implications of deaths due to heat-reaction states seems appropriate.

Deaths resulting from heat stroke are reportable to the medical examiner. They are considered as accidental deaths due to a physical agent of the external environment. The importance of a proper determination of the cause and manner of such deaths can be appreciated since it may mean the payment of double indemnity insurance or Workmen's compensation to the family of the decedent.

The aggravation of existing chronic cardio-vascular disease or of debilitating conditions in elderly individuals by summer "heat-waves" is well known, but these deaths are not accepted as true cases of heat stroke by the local medical examiners. They more properly should be signed out as due to the underlying disease condition present in the individual unless they show the criteria of heat stroke which will be described later.

The prompt recognition by the physician of the difference between a case of heat exhaustion and one of heat stroke is imperative. Heat stroke is one of the few true medical emergencies and requires prompt heroic treatment if the patient is to have any possible chances of survival. Furthermore, the treatment of these two conditions is radically different.

Extreme summer heat may produce one of at least three primary symptom complexes. These are heat cramps, heat exhaustion and heat stroke. Heat cramps are muscular cramps of the extremities and abdomen due to excessive salt loss. The condition can be readily relieved or prevented by ingestion of salt tablets or salt solutions on the job. There is no elevation of body temperature and no significant mortality.

Heat exhaustion is a state of collapse due to peripheral vasomotor failure. Faintness, usually with the subjective sensation of palpitation is the predominant symptom. Profuse sweating and marked salt depletion are contributing factors. It usually results from physical exertion in a hot environment when vasomotor control and cardiac output are inadequate to meet the needs of increased skin circulation in addition to muscle and cerebral circulation. The skin is usually cool and moist and the body temperature is normal or only slightly elevated in some cases.

Removal of the individual to a comfortable environment and supplying of mildly salted fluids by mouth generally suffices for a complete recovery. However, in the older patient with a prolonged response to recovery, the presence of some cardio-vascular disease can be suspected. If death ensues in such a person and the body temperature is normal or only slightly elevated and the skin moist, it should not be accepted as one due to heat.

Susceptibility to heat exhaustion varies with physical condition although it does occur in those deemed in the most fit state of health. Alcoholism, old age and chronic cardio-vascular disease are the most frequent pre-disposing factors.

Heat stroke, also known as heat hyperpyrexia, is due to prolonged exposure to a hot environmental temperature with relatively high humidity. Above 95 degrees Fahrenheit sweating is the sole method of heat dissipation. Conduction, convection and radiation of heat from the body under these hot, humid conditions no longer is effective in eliminating excess body heat and after a time the central heat-dissipating mechanism breaks down. As a result of this, sweating ceases, causing a greater accumulation of heat within the body.

Heat stroke may occur then with dramatic suddenness after the cessation of sweating, producing the classical picture: a person working under hot humid environmental conditions suddenly stops sweating and collapses unconscious or may have premonitory headache, feeling of extreme heat, weakness, nausea, faintness, mental confusion, staggering gait or convulsive seizures. The skin in almost all cases will be *hot and dry.*

In a series of 125 fatal cases in the Armed Services three general types of onset of heat stroke were found: a) acute, without apparent warning (71%), b) relatively acute, with brief prodromal symptoms (21%) and, c) insidious, with premonitory signs and symp-

*Contributed by: Harold L. Beddoe, M.D., Fellow in Legal Medicine, Office of the Chief Medical Examiner, Richmond, Virginia.

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toms lasting sometimes for several days (8%). Death occurred in less than 24 hours in 70% and in from 1 to 12 days in the remaining 30%. When death occurred in less than 48 hours early coma or delirium persisted until death. When the illness lasted longer than 48 hours the course was characterized by early coma which tended to clear up partially until a terminal relapse supervened, or by slow progression and late coma. The pathologic changes in the central nervous system were most conspicuous and consisted of degenerative changes in the neurons, congestion, edema and petechial hemorrhages. Hemorrhages in other organs and tissues were common and were considered due to shock while the cellular degenerative changes were attributed to the effects of excessive heat.

Treatment is prompt and vigorous and aimed at lowering the body temperature to a safe range (102°) as rapidly as possible since brain damage appears to be related to both temperature and time. Packing the entire body in ice packs, immersion in ice water and evaporative cooling by spray and fans are all methods recommended by various authorities. Massage of the extremities is advised to prevent peripheral vascular stagnation and to allow for more rapid transfer of heat. Intravenous fluids should be used with care to prevent pulmonary edema. Salt loss is not usually a prime factor in heat stroke so no efforts to replace salt should be made during the emergency phase of treatment. Further treatment measures are readily available and will not be considered here.

Heat stroke may be confused with other diseases of the central nervous system producing coma and hyperpyrexia and occasionally with overwhelming sepsis without external manifestations. Heat stroke is also erroneously diagnosed in cases of heat exhaustion complicating an existing cardio-vascular or debilitating condition which ordinarily would be listed as the primary cause of death.

Although occasional cases of heat stroke are described without the classical hot dry skin, absence of sweating and hyperpyrexia, it would be more accurate to include in this diagnosis only those cases demonstrating these signs and with a temperature over 106°. Rectal temperatures are easily taken after death and are recommended to support the diagnosis. Temperatures over 111° have been recorded in cases reported by local medical examiners even 4 to 6 hours after death. With such evidence to support the diagnosis the physician will help insure more accurate vital statistic records and prevent possible delays in settlements of estates, insurance policies and Workmen's compensation claims.

New Books.

Below we list some of the new books received at the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. These are available to our readers under usual library rules.

American College of Surgeons, 1953 directory. 1953.
Arnold—Modern concepts of leprosy. 1953.
Boies—Fundamentals of otolaryngology. 2nd ed., 1954.
Bremer—Some problems in neurophysiology. 1953.
Campbell—Manic depressive disease. 1953.
Child—The hepatic circulation and portal hypertension. 1954.
Conant and Smith—Manual of clinical mycology. 2nd ed., 1954.
Emmett—Catalysis, Vol. 1, Fundamental principles, pt. 1, 1954.
Herriott, ed.—Symposium on nutrition. 1953.
Hughes—Pediatrics in general practice. 1st. ed., 1952.
Lerner & Lerner—Dermatologic medications. 1954.
Lucas—Symptoms and treatment of acute poisoning. 1952.
Matheney and Topalis—Psychiatric nursing. 1953.
Moritz—The pathology of trauma. 2nd ed., 1954.
Recent progress in hormone research. 1954.
Reddish, ed.—Antiseptics, disinfectants, fungicides, and chemical and physical sterilization. 1954.
Surgical forum. Vol. 4, 1953, 1954.

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MENTAL HEALTH

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

The Role of the Psychologist in the Mental Hospital*

The psychologist working in a mental hospital feels that he can best function in three primary areas of his profession: in producing research, in helping in the assessment of personality, in assisting in treatment of functional mental and emotional disorders through psychotherapy. Another important part of each psychologist's work is his interested participation as a member of the hospital community. Many mental institutions are understaffed and it may not be possible for the psychological staff to work actively in all three areas, research, description of personality, psychotherapy; however this article will deal with an ideal situation, and will describe how the psychologist might regard his own role in a fully staffed mental hospital.

First and perhaps most important of all in the long view is the field of research. Diagnosis and treatment at the present time are based largely on the findings of scientists of the past. Some of the knowledge utilized in evaluating and treating the personality disorders derives from folk wisdom, some of it is part of our cultural heritage, stemming from philosophical and religious ideas developed centuries ago, but much of it is based on scientific discoveries, made by individuals who were capable of objective handling of observation and fact and who were able to classify and analyze what they observed. From observation, hypothesis were formulated; in some cases they were tested, found to be incorrect, and were discarded, while in other cases they were tested and found to be correct. From them, new hypothesis were developed, checked, and accepted or discarded. It is this fund of knowledge obtained by scientific observation and research in the past which forms the basis for nearly all of the present thinking in the field of abnormal psychology. But though much has been learned, there remains a tremendous area yet to be explored: mysteries of the human personality, so-called normal and abnormal, continue to confound those who specialize in the study of human behavior. It is here that the psychologist should have a unique contribution to make. Firmly grounded in the experimental method of pure science, and aware of the importance of objectivity, he should be well equipped to undertake research in the complexities of personality.

One of the major difficulties in research in clinical psychology is that the methodology of the past is no longer adequate for certain problems of the present. The human personality used to be seen as a more or less fixed cluster of traits and attitudes, but now it is regarded as a dynamic process, a reacting, moving configuration as the human organism continually adjusts to himself and the world around him. One can work with individual segments of personality, plucked out of time, halted, motionless; but how meaningful are these temporarily suspended portions, separated from the constantly adjusting whole? Here the approach should be molar rather than molecular. The emphasis must be on the gestalt, on the organism in the total environment, on the whole organism constantly moving toward adjustment, toward equilibrium. Research in this very complex area has been hampered by rigid methodology, still appropriate for much scientific investigation but which no longer fully meets the needs of research in clinical psychology. Fresh, clear thinking is essential in the working out of new procedures and many scientists are now devoting their efforts to this phase of psychological investigation. As a different methodology is developed, retaining the scientific strength of past techniques and adding the flexibility and new dimensions of the present, research into the complexities of human behavior will become increasingly valuable.

A second important field in which the psychologist works is in the assessment of personality. Here again the emphasis is on the total organism. Numerous tests have been developed to assist in the study of personality, and some of these devices are widely used in mental hospitals. There are two main categories, intelligence tests, designed to measure the individuals' functional level of mental ability, and personality tests, now made up primarily of projective techniques. These projective tests in the hands of a skilled clinician have been found extremely helpful in the study and evaluation of the complex adjustive processes which make up the personality.

*Article prepared by Penelope Lewis, M.A., Psychologist, Western State Hospital, Staunton, Virginia.

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From a battery of these tests, and from interviews and observations and material garnered from other departments of the hospital, the psychologist offers a description of the interplaying intellectual and emotional adjustive activities which constitute personality. Although the psychologist's report is utilized by the hospital staff for establishing the diagnosis of the individual patient, it is felt that description is of more value than classification and that it is more important to understand why a person does something than to give what he does a label. An awareness of the reasons for a patient's behavior should be of tremendous help in facilitating his treatment.

A recent trend which should be noted here is the new emphasis on the "positives" in a given situation. Satisfactory description of the personality should always include both positive and negative factors. Historically the approach to the psychoses and the personality disorders has always featured the differences, the peculiarities, the "abnormalities". There has been a marked tendency to use "abnormality" as a frame of reference; today there is a widening trend toward considering "normality" the more proper frame of reference. From this new perspective the therapeutic team is better able to evaluate the whole individual and better able to assist him toward a happier and more meaningful life, toward a life of greater fulfillment.

The field of psychotherapy is a third area in which the psychologist many function. Like other members of the therapeutic team of the mental hospital, he may wish to participate in treating the patient. Depending on his training, ability, and his own special skills, he may offer psychotherapy to certain patients for whom it is felt this form of treatment might be beneficial. Here it is important that the psychologist remain in his own field of competence and work only with the functional aspects of the case. The medical and neurological factors may be of great interest to the psychologist, in fact he should be acutely aware of them since his orientation is primarily functional, but they lie outside of his chosen specialty and must of course remain in the hands of the physicians. There are many approaches to psychotherapy: it can be offered to a group or to an individual; it may be directive or non-directive, it may be primarily supportive or interpretive in nature; it may be superficial or it may go deeper into the psychological organization of the patient. Each therapist tends to move toward that approach which he has found especially effective and helpful, and with which he is most comfortable and therefore most proficient.

Another way in which the psychologist should function, although it is not officially part of his responsibility, is as an active, participating citizen in the hospital community. It is perhaps more in this role than in any other that he will be able to expand his own horizons, broaden his thinking, and come to be aware emotionally as well as intellectually of the vitality and verity of the molar approach. As a member of the hospital community, he may come to see the patient and his problems from many vantage points; he may become increasingly aware of the viewpoint of the occupational therapists, the attendants, the physicians, the nurses, the psychiatric social workers, the chaplains. The psychologist becomes acquainted with the slants of the other members of the staff and at the same time is able to share with them some of his own insights.

One of the serious difficulties of the modern thinker involves becoming proficient in a special field of knowledge without losing sight of the larger picture. Human knowledge is much too great for one person to acquire and understand at the present time; the Renaissance man can no longer exist; and specialization with its rigid compartments has become accepted for practical reasons. However with the creation of these rigid compartments has come a tendency to ignore the fact that they were set up by people in order to increase efficiency. The interrelations, the fact that compartmental lines must be crossed, the recognition of continuous rather than discrete units which cannot move beyond the man-made boundaries, tend to be overlooked in this fallacious order which we have created. With the setting up of special areas for the convenience of thinking, we have to some extent narrowed our thinking. We recognize the phenomenon of "tunnel vision" medically; are we all partially guilty of "tunnel thinking"? Each member of the mental hospital team has an opportunity to try to enlarge his thinking by taking an active role as a participating citizen in the hospital community.

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Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Medical School Building, University, Va.

Reprints of this and preceding Bulletins may be obtained from this office

June 1, 1954

Case Report

A 47 year old man went to his physician, complaining of mucopurulent discharge from the left nostril and pain in the left cheek. The symptoms were of about three months' duration and were growing progressively more severe, but there was no history of acute upper respiratory infection.

The physician examined the patient and told him he had a polyp in the left nostril. He treated him for six months with nose drops, during which time the symptoms continued to grow slowly worse.

The patient finally sought the advice of another physician who immediately referred him to an otolaryngologist. X-ray studies of the paranasal sinuses demonstrated an opaque left antrum and bone destruction in its lateral and superior walls. Biopsy of the polyp was reported adenocystic basal cell carcinoma.

Vigorous radiation therapy to the left face was followed by complete remission of local manifestation of cancer. For five and a half years, the patient remained completely well. Then he began to complain of weakness and loss of weight. A chest x-ray revealed numerous bilateral pulmonary metastases. Six months later, he died.

Comment: The fate of the cancer patient lies in the hands of the first physician who sees him. No amount of knowledge, skill or treatment can save a patient when the first physician he consults gives him advice which delays diagnosis and treatment until his cancer has become a systemic disease.

No one will ever know what the effect on the outcome of the above case might have been if the first physician had been more alert. At the very least, he delayed diagnosis and treatment for six months.

There were three faults:

1. The physician's index of suspicion for cancer was much too low. Obviously, the doctor who does not think of cancer will never diagnose it.

2. He made a pathological diagnosis (benign polyp) without a biopsy. Incidentally, the State Health Department through its Bureau of Cancer Control, has brought tissue diagnosis within easy reach of every physician in the State. There is no longer any reason to omit a biopsy, regardless of the physician's location or the patient's financial status. Anyone unfamiliar with the mechanics of using this service is urged to write to Dr. Mason Romaine, Director, Bureau of Cancer Control, State Health Department, Richmond.

3. In spite of the lack of response to treatment, the physician did not review the case or attempt a revision of his initial impression.

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NOTES ON PULMONARY TUBERCULOSIS*

Standard Diagnostic Study (IV)

History, Physical Examination, Gastric Lavage

Standard Diagnostic Study for confirmation or exclusion of pulmonary tuberculosis includes consideration of the following components; (1) Personal and family *history,* (2) evaluation of *symptoms,* (3) *physical examination,* (4) *x-ray* examination (including serial and special position films, when indicated) (5) examination of *sputum* (including culture) for Tubercle Bacilli, (6) culture of *gastric* washings (particularly where there is no expectoration), and (7) the *tuberculin test.*

* * * *

History: Inquiry will be made concerning the patients symptoms (if any), including a survey of past complaints as well as those that may be present at the time the physician is consulted. (See January issue, *Virginia Medical Monthly*) Arrangements should be made to secure any previous survey films or other x-rays of the chest, for comparison.

The patient will be questioned as to recent or remote serious illness, accidents, unusual physical strains or emotional stress incident to employment or otherwise, or anything that might suggest a reasonable explanation for a temporarily or chronically lowered constitutional resistance to disease in general or to tuberculosis in particular.

Although it is well known that tuberculosis is an infectious disease and is not inherited, a careful review will be made of the *family history,* for children brought up in households where one or more members have or *have had* tuberculosis are usually exposed to repeated and often massive infection. Under these circumstances it is only natural that many will contract infection and some will develop actual disease either in childhood, or more often, *later in adult life.* Inquiry is made as to the patient's parents, not *primarily* because they are his parents, but because for many years they have been his closest associates, and it is therefore logical to consider them first as a possible source of infection. Other close or repeated contact with known cases of tuberculosis, whether or *not* considered to be "active" at the time, should be made a matter of record, not excluding exposure to persons having a chronic cough and/or expectoration, regardless as to what these symptoms may have been attributed to by the party in question or by his physician.

Information being accumulated would indicate that there may be considerable variation between racial and family-group, as well as individual susceptibility to both tuberculous infection and disease. Factors such as these would help explain why, of two or more persons similarly exposed under corresponding conditions, one contracts infection and develops tuberculosis, whereas the other may do neither.

More than half of the persons diagnosed as tuberculous today have never heard of a case of tuberculosis in their family nor can they cite any other definite contact with a tuberculous individual.

A history of diabetes (mellitus) is important because this disease and pulmonary tuberculosis not infrequently are observed to occur concurrently. The presence of one *always* suggests examination for the other.

Recent (or less recent) administration of *cortisone for any purpose* is always worthy of note because of its well known untoward effect upon tuberculous lesions, latent or otherwise.

The presence of *silicosis* has long been recognized to predispose to the development of clinical tuberculosis in persons who are subsequently infected; when superimposed, it tends to light up a previously dormant infection.

* * * *

Physical Examination. Innate ability to resist tuberculous infection or disease *varies greatly* between individuals and does not *necessarily* correspond to *outward appearance;* the apparently robust may be lacking in resistance, the worn-out and "shriveled" *may* be almost immune!

Examination should be made with the chest bared.

Just as people vary widely in the way tuberculosis

*Prepared by the Virginia State Health Department.

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affects them symptomatically (see January issue, *Virginia Medical Monthly*), striking disparity is often observed in the degree to which tuberculous disease is revealed to the physician on physical (and even x-ray) examination. No one knows why, but occasionally persons with advanced tuberculosis, to say nothing of cases with lesser disease exhibit evidence of but a small fraction *if any* of their involvement upon physical examination; changes in the tissues which have taken place do not happen to have caused corresponding modification in physical signs, or are completely masked by surrounding normal lung tissue.

On the other hand, a telltale friction rub may reveal pleural inflammation before thickening or effusion can be seen on x-ray. Fine moist rales may precede evidence of exudation or consolidation on the x-ray film; rales often accompany x-ray evidence of active disease; rarely may they persist for a time after the x-ray shadows with which they were associated, have disappeared.

It is perhaps unnecessary to recall that these *potentially significant fine, moist rales* often can be elicited *only* in the initial phase of inspiration immediately following a forced cough at the end of expiration. The presence of such rales should never be regarded lightly; usually they indicate a previous, if not current, disease process of some kind.

Physical examination of the chest even when performed by a chest specialist is *perfectly normal* in a vast majority of cases with minimal *active* tuberculosis (to say nothing of the "apparently inactive"), and in many with moderately advanced active disease; therefore complete absence of abnormal physical signs does not exclude the presence of lung pathology. On the other hand, abnormal physical signs almost always denote an associated abnormal physical status, *sometimes* worthy of much additional study. For example, the detection of a unilateral wheeze commonly calls for a bronchoscopic examination (with bronchogram) particularly when the concurrent conventional chest x-ray shows no significant deviation.

In a word, *Standard Diagnostic Study* for the purpose of confirming or excluding the presence of pulmonary tuberculosis *is never complete* without a *careful* physical examination.

The physician who doesn't expect to learn much from a physical examination of the chest, seldom does; he may overlook even fairly obvious abnormalities. Skilled use of the eyes, ears, and fingers represent an art achieved only by long and conscientious practice. The truly competent physician, after painstakingly acquiring the art, forever after guards against disuse atrophy!

* * * *

Gastric Lavage. The steadily increasing usefulness of this extremely practical diagnostic aid has been more and more widely recognized and appreciated during the past decade. Today the test is accepted as one of the basic elements which compose standard diagnostic study for pulmonary tuberculosis. The larger the proportion of tuberculous suspects who are first singled out by mass x-ray screening of persons without cough or expectoration, the more frequently must the physician have recourse to gastric lavage to help clinch diagnosis and/or to determine activity status.

Recovery of tubercle bacilli from the fasting stomach contents almost invariably means that the patient has an active tuberculous lesion, shedding tubercle bacilli, somewhere in the *respiratory* tract. Most commonly the bacilli are derived from secretions (unassociated with either "clearing of the throat" or true expectoration) normally wafted up into the pharynx by cilia lining the bronchial tree or they may be contained in sputum, swallowed during the night. Almost never does a positive gastric culture reflect the presence of an unsuspected tuberculous lesion outside the respiratory tract.

A Levin tube is used for aspiration of fasting stomach contents; the recommended technique for collection is very similar to that employed in ordinary gastric lavage, familiar to most physicians.

The patient should be instructed to take no food or fluid after the evening meal of the day preceding the lavage. The following morning the subject will present himself as early as is practicable, to his doctor's office, or to a clinic, or laboratory.

Since primary interest lies in an effort to *culture* tubercle bacilli from the washings, equipment used should, of course, be sterile, and every effort should be made to avoid introduction of contaminants while collecting the specimen.

The Levin tube should first be chilled, preferably by placing in a dry, small, thin-walled, sterile metal pan. The *pan* (not the tube) can then be packed in ice. Ice made from tap water sometimes contains non-pathogenic acid fast organisms; ideally, therefore, direct contact between ice and tube should be

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avoided. Experience has taught that it is well to have a second tube in reserve to save time and embarrassment should the first become inadvertently contaminated during course of collection.

If desired the tube can be lubricated with a sterile water-soluble jelly; it is then passed into the stomach usually via the nasal route. Sterile gauze is sometimes used for handling. When introduction is slow and gentle, and the patient is instructed to swallow as soon as the tube is felt in his throat, there is seldom any nausea or other difficulty. The procedure is so simple, indeed, that with a little practice it can be performed successfully and *repeatedly* on small children.

Only rarely is passage through the nose accompanied by sufficient discomfort to require local anesthesia; however, one or two sprays of an appropriate topical anesthetic will prevent, or promptly relieve, any pain that might be experienced by an overly sensitive patient.

As soon as the tube reaches the stomach aspiration of contents is made with a 20 cc glass (luer) syringe. Usually from one to two ounces is obtained readily.

When very little or no material can be obtained immediately, up to 20 cc of sterile water, in small increments, may be introduced through the tube, to facilitate withdrawal of a satisfactory specimen.

Unless a laboratory, prepared to make cultures, is close at hand for direct delivery, the gastric washing should be placed carefully in a special sterile 4 ounce glass bottle which contains a small amount of trisodium phosphate as a buffer-preservative. These sterile bottles, with cardboard containers for mailing, can be obtained without cost by physicians from the State Health Department Laboratory in Richmond. Specimens can be mailed to the laboratory of one's choice or returned to the State Health Department Laboratory for culture, the same as with samples of sputum.

Ideally and *wherever* feasible the gastric lavage should be performed at bedside, in the home or hospital, shortly after awakening, to assure maximum recovery by culture of organisms present. In this way loss of varying proportions of fasting stomach contents incident to peristalsis, which so often begins when the patient gets up and dresses to go the doctor's office, can be avoided.

Ideally, and *wherever* feasible the gastric washings should be cultured immediately upon recovery.

However, even though, for practical reasons, these recommendations are virtually never carried out on specimens submitted to the State Laboratory, enough positive cultures are obtained *regularly* by the latter to amply justify far greater use of the test, using the modified method described above. During the calendar year of 1953, 14.3% of gastric washings cultured by the State Laboratory in Richmond were positive for Tubercle Bacilli.

Public Relations Tip for Component PR Chairmen

For some first-hand information on current public relations problems confronting the Medical profession and what to do about them, plan now to attend AMA's Third Public Relations Institute September 1 and 2 at Chicago's Drake Hotel. This workship-styled meeting, devoted mainly to an exchange of suggested public relations techniques, is of particular interest to state and county executives and PR personnel of these societies as well as PR chairmen.

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PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Poliomyelitis Vaccine Field Trials in Virginia—1954

In December word came from the National Foundation For Infantile Paralysis that vaccine against poliomyelitis as developed by Dr. Jonas E. Salk, of the University of Pittsburgh, would be available early in 1954 for field trials. They asked the State Health Department to submit the names of areas in which poliomyelitis had shown a persistent high incidence during the past few years or in which the disease had been present during October and November, 1953. The populations of these areas were reported together with estimated numbers of pupils in the first, second and third grades of school.

There was a meeting in January at which a representative of the head office of the Foundation was present. He stated that Virginia had been too modest in the list submitted and suggested that other areas be added. Accordingly data for two or three additional sections were forwarded. It then became necessary to send to the National Foundation For Infantile Paralysis the actual enrollments in the first, second and third grades, the name of each school and the number of school rooms involving the grades in question. The Advisory Committee to the National Foundation reviewed these reports and on March 8, 1954 the State Health Department was notified that the Cities of Alexandria, Bristol and Richmond, and the Counties of Arlington, Loudoun, Fairfax, Henrico, Chesterfield, Norfolk, Smyth and Washington had been declared eligible. The Medical Directors of Health of each of these cities and counties were called by telephone and told of the selections.

At the January meeting the chairman of the poliomyelitis committee of The Medical Society of Virginia stated that he was confident that the members of the committee would approve of the State Health Department accepting the invitation to have Virginia take part in the field trials of the vaccine. He later polled his committee and only one member voted against participation.

The State Superintendent of Instruction had been present at the meeting in January and had assured the group of the cooperation of the superintendents of the schools in the areas under consideration. This cooperation has been evident from the start and has continued throughout the period of planning and into the actual administration of the vaccine. They have furnished all the school figures that have been asked for by the National Foundation for Infantile Paralysis. The superintendent of the parochial schools in the Roman Catholic Diocese of Virginia has likewise been most helpful.

In a few days after the notification was received the Manual of Suggested Procedures For the Conduct of The Vaccine Field Trial in 1954 was shipped and a copy was sent to each director of the selected areas. At the same time each one was notified of a meeting to be held in the State Health Department on March 17, 1954, to discuss and plan for the field trials. Each was asked to bring the superintendent of schools in his county or city, and any other key people who might be interested. The meeting was fully attended and in addition to those named, the commissioner, the directors of participating bureaus, representatives of The Medical Society of Virginia and the state and national offices of the National Foundation for Infantile Paralysis, were present. The physician from the Foundation reviewed the high spots of the Manual and answered questions. There was extreme disappointment, openly expressed by everyone, that the date of release of the vaccine could not be announced. In spite of the lack of a specific date to plan to give the first injections, the directors of health agreed to start immediate organization.

Early in April the forms needed for parental requests, school rosters, vaccination and blood test recording, film strips and pamphlets for educational purposes were distributed. Tentative dates were set for the first vaccination and, later, on hearing that the release date could not be announced until after April 21, these dates were extended. The many groups who would participate were briefed over and over again and finally, in one area, special delivery letters with instructions listed a, b, and c, were mailed in time to be delivered the day before V-Day.

An important consideration was the long-planned annual Virginia Public Health Conference held in Roanoke on April 21, 22, and 23, at which the directors of health, nurses and sanitarians were in

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attendance. It was during this meeting that the commissioner was notified that the first part of the shipment of vaccine had been received in the central office of the Health Department on April 21, and the rest had come in the following day. The vaccine had to be held under refrigeration until the notice of action by the Advisory Committee to the National Foundation permitted its release to the counties and cities designated. This permission was received late the afternoon of Sunday, April 25, and immediately shipments to Fairfax and Loudoun Counties went in one automobile and to Norfolk County in another. The next day the State Police relayed the allotment for Smyth and Washington Counties and the City of Bristol. Henrico and Chesterfield Counties and the City of Richmond picked up their own. The City of Alexandria, following action by their local Medical Society, on April 8, declined participation, and the County of Arlington which first had accepted, withdrew on April 16.

The first use of the commercially produced vaccine, other than tests by Dr. Salk, was in Fairfax County, Virginia, on Monday, April 26, 1954. Vaccinations in the other areas followed daily during this week and the vaccine has been given with clock-like precision as a result of the well prepared program and the splendid cooperation of all concerned. Without the help of the public school system and the private schools, members of the medical profession and lay volunteers, the National Foundation for Infantile Paralysis and the health departments would not have been able to carry through the project.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	April 1954	April 1953	Jan.-April 1954	Jan.-April 1953
Brucellosis	2	1	9	16
Diphtheria	3	1	22	45
Hepatitis	420	185	2101	754
Measles	5534	903	12760	2385
Meningococcal Infec.	6	16	44	102
Poliomyelitis	4	3	16	10
Rocky Mt. spotted fever	1	2	1	2
Streptococcal Infections (Including scarlet fever)	654	489	2106	2633
Tularemia	1	0	17	14
Typhoid Fever	3	3	14	12
Rabies in Animals	46	42	174	194

PUBLIC RELATIONS

Virginia's PR Frontier

The world in which we live little resembles the world of twenty-five years ago. The changes have been rapid—brought about by improved communications and transportation. The most powerful forces behind these changes have undoubtedly been two of the most fabulous inventions ever devised by man.

First it was the radio, bursting upon the scene with an impact felt in every corner of this nation—an invention which almost overnight changed the thinking and living habits of millions.

Then it was television, coming on to completely revolutionize the fields of education and entertainment. The public imagination was captured as never before by this newest scientific phenomenon. Living rooms were planned and built around the TV set, and a fantastic crop of TV antennae blossomed from the nation's roof tops.

The result is a new American frontier—a public relations frontier with potentialities which stagger the imagination. Today nearly every home has a radio or TV set, and most have both. It is even more remarkable when it is considered that radio is heard by just about everyone, including the vast number who do little reading . The doors of public information have been opened in every home, and the welcome mat is out.

The Public Relations Committee of The Medical Society of Virginia, together with the PR committees of component societies, has undertaken to pioneer this new frontier, and progress thus far is most encouraging. Medical radio programs designed to appeal to all types and age groups are currently being presented by radio stations in Crewe, Danville, Farmville, Fredericksburg, Hopewell, Lynchburg, Narrows, Norfolk, Petersburg, Richmond and Suffolk. It will not be long before the entire state is covered.

Medical television programs have been presented in Lynchburg, Norfolk and Richmond, and others are scheduled. The response has been even better than expected, and it is becoming more and more apparent that Virginia's new frontier is indeed a challenge to our PR pioneers.

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WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. K. W. HOWARD, Portsmouth
President-Elect—MRS. MAYNARD EMLAW, Richmond
Recording Secretary—MRS. LEE S. LIGGAN, Irvington
Corresponding Secretary—
MRS. LEMUEL E. MAYO, Portsmouth
Treasurer—MRS. WILLIAM C. BARR, Richmond
Publication Chairman—MRS. WM. S. GRIZZARD, Petersburg

Northampton-Accomac.

The regular meeting of this Auxiliary was held on April 13th at "Wellington", the home of Dr. and Mrs. Edmund Henderson at Nassawadox. Following a delightful luncheon, the business session was opened by the president, Mrs. E. E. Mihalyka. Mrs. W. J. Sturgis, Sr., read a poem "The Power of Thought" and the auxiliary pledge was repeated in unison.

At the close of the meeting, the members were invited to make a tour of the new Health Center in Nassawadox and were shown a film about the work of the Health Department in Virginia. Nineteen members were present.

MRS. SHEPPARD K. AMES, *Secretary*

Petersburg.

Mr. Sydney Swann was the guest speaker at the April meeting of the Petersburg Medical Auxiliary. He is president of the Southside Area chapter of the Virginia Association for Mental Health. He enlisted the aid and cooperation of the auxiliary in awakening the public to the need of a mental health clinic in Petersburg.

Plans for the annual luncheon meeting was discussed and Mrs. Meade Edmunds and Mrs. Herbert Jones were named co-chairmen for the event.

Mrs. Palmore Irving gave a report on the success of the Spring rummage sale which was held in April.

A fund-raising dinner is to be held May 22nd at the summer home of Dr. and Mrs. Herman Farber, with Mrs. Farber, Mrs. Kirby T. Hart, Jr., and Mrs. Glenn Phipps in charge.

Mrs. John Hamner, who is the head of the nurses' recruitment program, urged that this program be continued even though the nursing school in Petersburg is closing. She stressed the great need for nurses whether they train here or elsewhere.

MARGARET S. WHITTLE

Alexandria.

On March 23rd, the Alexandria Auxiliary sponsored the play by Tennessee Williams, "Summer and Smoke" and sold out the 122 seats at the Arena stage in Washington. Auxiliary members entertained in their homes the groups to whom they had sold tickets. Approximately three hundred dollars was realized from this project which went into a fund for the purchase of a doctors' call board at the Alexandria Hospital.

Sunday, April 25th, was the annual clinic day given by the Medical Society for the doctors in the northern Virginia area. Auxiliary members were most active in procuring advertising for the program, in having the programs printed and in notifying the doctors in the area. They also planned a luncheon for the men, entertainment for the wives of those attending, and a cocktail party which brought to a close the activities of the day.

The annual luncheon meeting of the combined Alexandria-Arlington Auxiliaries was held on April 27th at Hunting Towers in Alexandria. Twenty-nine members from Arlington were present and thirty-two from Alexandria.

MRS. JAMES H. MASTERSON

Southwestern Virginia.

This Auxiliary met at the Martha Washington Inn, Abingdon, on April 15th. Mrs. C. C. Hatfield of Saltville, president, presided. A welcome to the group was given by Mrs. Harry Hayter of Abingdon.

Mrs. F. C. Bedsaul, Floyd, introduced the speaker, Mrs. Kalford W. Howard of Portsmouth, president of the State Auxiliary, who spoke on auxiliary activities. Mrs. Joseph Blalock of Marion, State Chairman of Mental Health, discussed mental health with emphasis on interesting films which may be obtained for use by community groups.

Following the meeting, the members enjoyed a

tour of interesting houses and antique shops in Abingdon, returning to the Inn for cocktails and the banquet.

Arlington.

The Arlington and Alexandria Auxiliaries met for luncheon on April 27th at the Magnolia room of Hunting Towers, Alexandria. Mrs. Kalford W. Howard, president of the State Auxiliary, was guest. Mrs. Maynard Emlaw, president-elect, who was to be a guest also, was ill and could not attend. Mrs. Howard gave a very informative talk on the activities throughout the state and the various projects of the auxiliaries. Mrs. Alfred Abramson, Alexandria, entertained the group with a medley of songs. She was accompanied by Mrs. Sverre Gulbrandsen.

It was a pleasure to have such a large number of both groups present for this annual get-together.

EARLE MITCHELL (Mrs. R. H.)

Norfolk.

The annual public relations meeting of the Auxiliary was held at the Norfolk Yacht and Country Club on April 21st. The presidents of the various womens organizations in the county, representatives of the newspapers, radio and television stations were invited to a luncheon to hear Dr. Walter B. Martin, president-elect of the American Medical Association, explain the Eisenhower health program. Mrs. Lemuel Mayo, public relations chairman, was in charge.

Richmond

The Auxiliary to the Richmond Academy of Medicine celebrated Doctor's Day on March 30th by sending flowers and cards to the sixteen doctors in Richmond who are members of the Fifty Year Club of The Medical Society of Virginia. On March 16th the Richmond News Leader carried a picture of Dr. Emily Runyon and a story concerning members of the Fifty Year Club, and on March 30th pictures and feature stories on Dr. Ramon Garcin, Dr. Thomas Murrell and Dr. William Parker. The Auxiliary presented a check for fifty dollars to the American Medical Education Foundation in honor of the members of the Richmond Academy of Medicine.

The Auxiliary organized its first Future Nurses Club at the Thomas Jefferson High School in April, under the direction of Mrs. Walter Buffey. Sixty students enrolled at the first meeting at which time a film "When I Choose Nursing" loaned by the Richmond League of Nursing was shown. A window in Thalhimer's Department store was decorated as a project of the Future Nurses Club, showing the caps worn by nurses in the seven schools of nursing in Richmond. This exhibit was displayed during the week of May 9th.

Assisting Mrs. Walter Buffey are Mrs. George Ritchie, Mrs. Adney K. Sutphin, members of the Auxiliary, and Miss Mary T. Oewel, the school sponsor. Mrs. Richard Kirkland will do research in behalf of the future nurses. She is compiling a list of nursing scholarships offered locally and hopes to publish the pamphlet by the end of the first Future Nurses Club year.

Has your society begun a new PR project during 1954? If so, the Public Relations Committee of The Medical Society of Virginia would like to hear about it. Your society—no matter what its size—may have hit upon an idea that will further PR efforts over the state.

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BOOK ANNOUNCEMENTS

Understanding the Japanese Mind. By JAMES CLARK MOLONEY, M. D. Philosophical Library, New York. 1954. xviii-252 pages. Cloth. Price $3.50.

Salt and the Heart. By EDWARD T. YORKE, M.D., Linden, N. J., Attending Cardiologist, Alexian Brothers Hospital; Associate Cardiologist, St. Elizabeth Hospital; etc. Drapkin Books, Linden, N. J. 1954. xi-83 pages. Cloth. Price $3.45.

Science and Man's Behavior. The Contribution of Phylobiology. By TRIGANT BURROW, M.D., Ph. D. Edited by WILLIAM E. GALT, Ph. D. Including the complete text of **The Neurosis of Man.** Philosophical Library, New York. 1954. xii-564 pages. Cloth. Price $6.00.

You and Your Health. By EDWIN J. JORDAN, M.D., Charlottesville, Virginia, Executive Director, American Association of Medical Clinics. G. P. Putnam's Sons, New York. 1954. xiv-296 pages. Cloth. Price $3.95.

Children for the Childless. A Concise Explanation of the Medical, Scientific, and Legal Facts about Conception, Fertility, Sterility, Heredity, and Adoption. Edited by MORRIS FISHBEIN, M.D. With Chapters by Sidonie Gruenberg, Morris Fishbein, M.D., Edward Weiss, M.D., I. C. Rubin, M.D., Nicholson J. Eastman, M.D., J. P. Greenhill, M.D., Fred B. Kyger, M.D., and Richard L. Jenkins, M.D., and Benjamin C. Gruenberg, Ph.D. Doubleday & Company, Inc., Garden City, New York. 1954. 223 pages. Cloth. Price $2.95.

Only the Happy Memories. Reminiscences of a Virginia Boyhood. By BRANTLEY HENDERSON, M.D., Halifax County, Virginia, and Sanford, Florida. Exposition Press, New York. 1954. 197 pages. Cloth. Price $3.00.

Illustrated Review of Fracture Treatment. By FREDERICK LEE LIEBOLT, A.B., M.D., Sc.D., LL.D., Attending Surgeon in Charge of Orthopedics, the New York Hospital; Attending Orthopedic Surgeon, Hospital for Special Surgery; etc. Lange Medical Publishers, Los Altos, California. 1954. 229 pages. Price $4.00.

The Meaning of Social Medicine. By IAGO GALDSTON, M.D., Secretary, Medical Information Bureau, The New York Academy of Medicine. The Commonwealth Fund. Harvard University Press, Cambridge, Massachusetts. 1954. viii-137 pages. Cloth. Price $2.75.

Seventy-Five Years of Medical Progress. 1878-1953. Edited and with a Foreword by LOUIS H. BAUER, M.D., F.A.C.P., Secretary-General, The World Medical Association; Past-President, The American Medical Association. Lea & Febiger, Philadelphia. 1954. 286 pages. Cloth. Price $4.00.

Menorrhalgia—Menstrual Distress. By WILLIAM BICKERS, M.D., Attending Gynecologist to Retreat for Sick, Sheltering Arms, Richmond Community and Evangeline Booth Hospitals, Richmond, Virginia. Charles C. Thomas, Springfield, Illinois. 1954. 97 pages. Cloth. Price $2.75.

Compulsory Medical Care and The Welfare State. By MELCHIOR PALYI. An Analysis Based on a Special Study of Governmentalized Medical Care System on the Continent of Europe and in England. Distributed by The Committee for Constitutional Government, Incorporated, New York. National Institute of Professional Services, Chicago. 1954. Cloth. Price 1 to 5 copies $2.00 each.

Thoughts About Life. By FELIX FRIEDBERG. Philosophical Library, New York. 40 pages. Cloth. Price $2.50.

A Doctor Talks To Women. What They Should Know About the Normal Functions and Common Disorders of the Female Organs. By SAMUEL RAYNOR MEAKER, M.D. Simon and Schuster, New York. 1954. xiii-231 pages. Cloth. Price $3.95.

The Jealous Child. By EDWARD PODOLSKY, M.D., Department of Psychiatry, Kings County Hospital, Brooklyn, New York. Philosophical Library, New York. 1954. ix-147 pages. Cloth. Price $3.75.

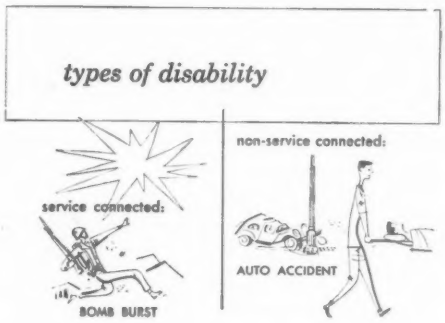
This is a popular, down to earth, representation of generally accepted concepts in psychology and psychiatry, on the emotional development of children. Twenty-two of the twenty-five chapters explain the psychological reactions of children to their specific problems of isolation, such as, physical defects, chronic diseases, left handedness, sensory defects and speech disorders, individual rejection within the family group, parental uncongeniality of various degrees, illegitimacy, adoption, the filiation to a minority group and others.

In the chapter the Jealous Child, the author brings the reactions of these various groups on a common denominator, jealousy being defined as a manifestation of many inner needs that are not and cannot be fulfilled.

The book would have benefited by a more searching approach which would have permitted an insight into the way such children's problems develop individually, rather than to state them more or less dogmatically.

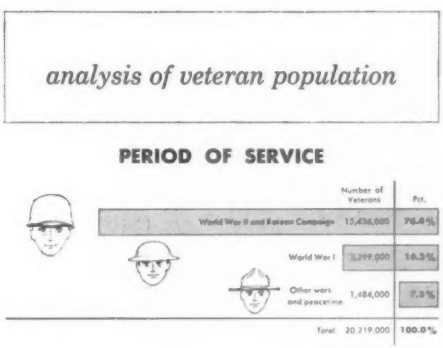
H.R.

In Viewing the VA Medical Program . . .



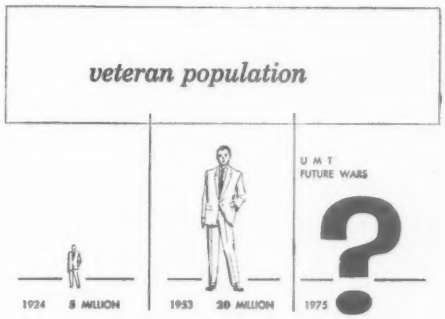
The medical profession fully endorses and supports the medical program of the Veterans Administration through which veterans receive medical care and hospitalization without cost for illnesses or injuries incurred as a result of military service (left). It is felt, however, that the federal government should not assume the responsibility for the medical care of veterans whose disabilities are incurred in civilian life and which have no relationship to their military service.

In Viewing the VA Medical Program . . .


analysis of veteran population
PERIOD OF SERVICE
Number of Veterans
Pct.
World War II and Korean Campaign 13,436,000 76.4%
World War I 3,299,000 16.3%
Other wars and peacetime 1,484,000 7.3%
Total 20,219,000 100.0%

Taxpayers should note that as veterans grow older they require more frequent and increasingly longer periods of hospitalization. World War I patients are now hospitalized twice as long, on the average, as World War II patients with similar disabilities. World War II veterans, relatively young and comprising 76% of the total veteran population, present a costly long term responsibility to U. S. taxpayers. The medical profession recommends medical care through the VA for only those veterans with service-incurred disabilities and temporarily for those with tuberculosis or neuropsychiatric conditions of non-service-connected origin.

In Viewing the VA Medical Program . . .



The U. S. veteran population now includes about 40% of all adult males. Under existing legislation, the federal government is obliged to provide "free" medical care for many of these veterans, if they request it. The medical profession questions the soundness of providing medical care at federal expense to veterans with non-service-connected disabilities. It is likely that by 1975 the U. S. will truly be a "nation of veterans." If the VA medical program continues to accept responsibility for the care of veterans with service-connected and non-service-connected disabilities alike it is difficult to see how a complete federal health program can be avoided.

In Viewing the VA Medical Program . . .

analysis of present veteran population

AGE DISTRIBUTION (Exclusive of those discharged on or after June 27, 1950)

DATE	JAN. 1, 1952	JAN. 1, 1960	JAN. 1, 1970
TOTAL	18,850,000	18,160,000	16,146,000
AGE 22-44	77.2%	62.7%	13.5%
45-64	21.8%	27.4%	73.7%
OVER 65	1.0%	9.9%	12.8%

Older veterans are hospitalized more frequently for civilian-incurred ailments than for service-connected disabilities. By 1970, over 86% of the present veterans will be age 45 or over, more than three times the number in this older age group today. Because of advanced age, they will require more frequent and prolonged hospitalization for illnesses having no relationship to their military service. Responsibility for such medical care should be assumed by the individual or local government, not by the federal government.

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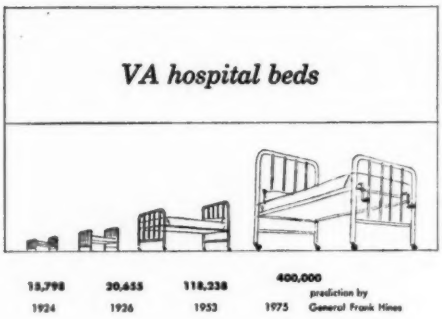
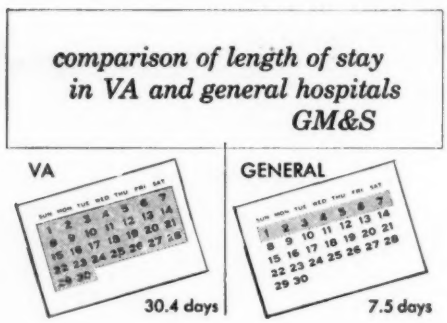
In Viewing the VA Medical Program . . .



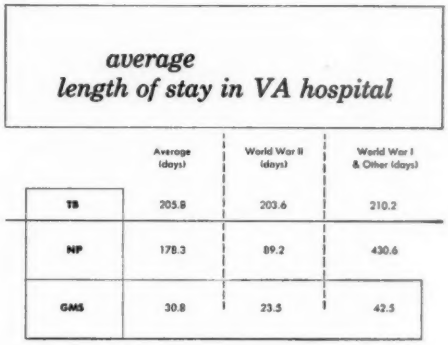
Former VA Administrator Frank Hines estimated that by 1975 under existing VA medical legislation, approximately 400,000 hospital beds will be needed. Yet medical authorities are convinced the VA cannot attract sufficient medical personnel to staff more than 120,000 beds. The VA now maintains three times the number of beds needed for treatment of service-connected cases.

In Viewing the VA Medical Program . . .



General medical and surgical patients in VA hospitals are confined four times longer than in non-federal hospitals. VA hospitals admit patients for examination, diagnosis, and treatment, much of which is normally undertaken outside civilian hospitals. Also, VA patients often remain hospitalized throughout the entire medical treatment period, whereas non-VA patients are usually treated at home during their convalescence. This is a major factor in the tremendous cost of the VA medical program.

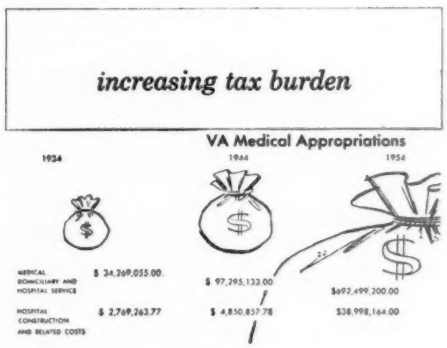
In Viewing the VA Medical Program . . .



	Average (days)	World War II (days)	World War I & Other (days)
TB	205.8	203.6	210.2
NP	178.3	89.2	430.6
GMS	30.8	23.5	42.5

The average length of stay in VA hospitals for World War I veterans is considerably greater than for World War II veterans, which now comprise 76% of the total veteran population. The greatest pressure is yet to be exerted on VA hospitals as World War II veterans grow older and require increased medical care for disabilities unrelated to military service.

In Viewing the VA Medical Program . . .



In twenty years, the cost of the VA medical program to U. S. taxpayers has increased 1,875%. Yet only 15% of the patients treated in VA hospitals are veterans with disabilities incurred while in uniform. The VA medical program is now second in size and expense only to the nation-wide system of socialized medicine in Great Britain.

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In Viewing the VA Medical Program . . .

how VA facilities are being used

Patients Discharged During 1951

	TOTAL	SERVICE CONNECTED		NON-SERVICE CONNECTED	
TB	21,388	10,550 = 2.1%		10,838 = 2.1%	
NP	47,673	16,530 = 3.2%		31,143 = 6.1%	
GM&S	442,834	51,820 = 10.1%		391,014 = 76.4%	
TOTAL	511,895	78,900	15.4%	432,995	84.6%

The medical profession recommends that VA medical care be maintained for treatment of all service-connected cases and temporarily for all wartime veterans suffering from tuberculosis or neuropsychiatric disorders of non-service-connected origin, within limits of existing VA facilities, if they cannot afford private medical care. General medical and surgical patients with non-service-connected disabilities (now 76.4% of all VA patients) should not be entitled to "free" federal medical care.

In Viewing the VA Medical Program . . .

VA patient load as of a given day

January 31, 1952

service connected 36,699 or 35%

non-service connected 70,910 or 65%

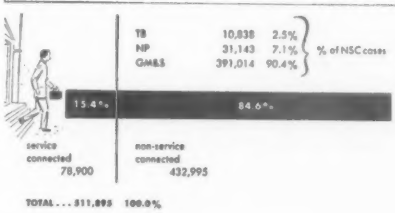
TB 9,652 or 13.6% NP 28,517 or 40.2% GM&S 32,041 or 46.2%

TOTAL 107,609 or 100%

While the VA lists its patient load on a given day as 35% service-connected, only the long-range view of admissions and discharges over a year's time gives a truly accurate picture of the service-connected load (only 15.4%). This "discrepancy" appears because the VA's listing of 35% on a daily basis is not affected by the yearly turn-over of patients—the ratio of VA patients remaining to those treated and discharged (1 to 5.1). Over a period of a year, 84.6% of VA patients are treated for disabilities incurred after—and having no relationship to—military service.

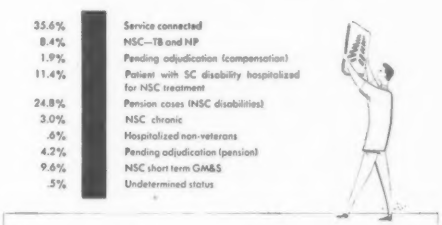
In Viewing the VA Medical Program . . .

VA patients discharged during 1951



Of 511,895 patients discharged from VA hospitals in 1951, only 15.4% were treated for illnesses or injuries incurred as a result of military service. Physicians believe it is unsound to continue authorization of "free" lifetime medical care for those who suffer no mishap while in uniform, while other citizens with no military background must pay their own way.

In Viewing the VA Medical Program . . .


35.6% Service connected
8.4% NSC—TB and NP
1.9% Pending adjudication (compensation)
11.4% Patient with SC disability hospitalized for NSC treatment
24.8% Pension cases (NSC disabilities)
3.0% NSC chronic
.6% Hospitalized non-veterans
4.2% Pending adjudication (pension)
9.6% NSC short term GM&S
.5% Undetermined status

VA explanation of patient load on a given day

The above classification is presented by the VA as an explanation of the large non-service-connected patient load in its hospitals. The medical profession recommends that only the first category and those in the third whose disabilities are determined to be service-connected should be entitled to federal medical care. Non-service-connected TB and NP cases should continue to be treated on a temporary basis until community and state facilities can be readied. The remaining groups obviously have no service-connection and are hospitalized for illnesses or injuries incurred in civilian life.

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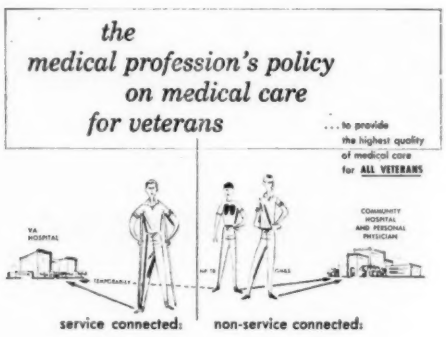
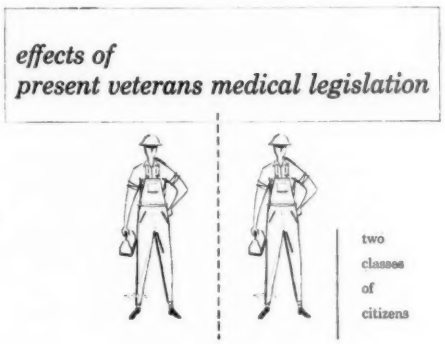
In Viewing the VA Medical Program . . .



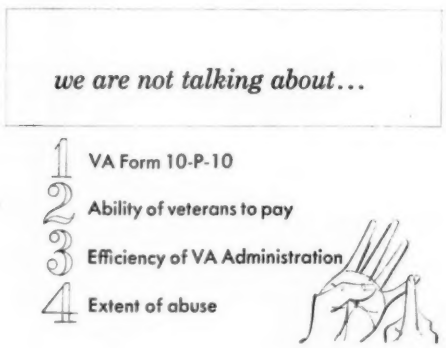
The medical profession stands for the highest quality medical care for all citizens. Veterans, as citizens, should accept the responsibility for their own health needs—unless they became disabled as a result of military service; then it is the responsibility of the Veterans Administration to provide medical care and hospitalization. Because many communities do not as yet have adequate facilities to care for war veterans with non-service-connected tuberculosis or neuropsychiatric disorders, the medical profession recommends that the VA continue—on a temporary basis—to treat these patients.

In Viewing the VA Medical Program . . .



It is the belief of the medical profession that it is unsound to authorize free lifetime medical care for veterans who suffered no mishap in uniform, while other citizens with no military background must pay their own way. Although the two men above are identical, they represent "two classes of citizens"—the veteran with no service-connected disability who is granted medical care at federal expense, and the non-veteran who must personally assume responsibility for his medical care.

In Viewing the VA Medical Program . . .



The medical profession is not concerned with alleged maladministration of present legislation by the Veterans Administration or with abuses by veteran-applicants of the hospital and medical care privileges. The nation's physicians do not feel that they have the responsibility to police the veterans medical care program, although they have cooperated wholeheartedly in assuring that veterans hospitalized under the present VA laws receive the highest quality of medical care.

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IN VIEWING THE VA MEDICAL PROGRAM . . .

what we are talking about...

1. Lack of moral or legal justification in providing federal medical care for ALL veterans
2. Effect of the VA program on civilian medical training programs
3. Current and eventual effects of VA program on civilian health standards
4. Competition for health personnel and patients
5. Unsound economics of overlapping federal medical services
6. Expanding tax-burden
7. Veterans' attitude toward VA medical program

These seven points are the conclusions of a careful analysis by the medical profession of the current VA medical program. (1) Veterans with no service-incurred disability should assume responsibility for their own medical care on the same basis as other citizens. (2) Medical schools and hospitals are hard pressed to train enough medical personnel for the benefit of all as long as the federal government siphons off such personnel from civilian programs. This VA practice has caused a duplication of hospital facilities and an unwarranted dispersion of health personnel. (3) The VA is creating an "artificial" shortage of medical personnel at the expense of civilian health programs. (4) Government has placed itself in competition with civilian medical programs, both for personnel and patients, making it increasingly difficult to operate civilian hospitals efficiently and economically. (5) Although the federal government is spending millions of dollars under the Hill-Burton act in civilian hospital construction, these hospitals are hard pressed to operate at reasonable cost while in direct competition with hospitals **wholly** supported by the federal government. (6) The medical profession asks whether a program providing "free" medical care to veterans with no service-incurred disabilities is a justified burden to impose on the taxpayers of this country. (7) Physicians do not believe that a veteran who served his country wishes to be the recipient of a federal "handout" at the expense of his fellow citizen-taxpayers.

PR TIP OF THE MONTH

Building good television relations is as important to a medical society as establishing good press relations. TV contacts pave the way not only for securing public service time for regular shows—but also for arranging "spot" interviews with outstanding medical men who may visit the community from time to time. In Binghampton, New York, a number of such "spots" have been arranged during local telecasts by the society.

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EDITORIAL

"Totimycin"

FEVER is a common symptom of many infectious diseases. Defervescence usually implies recovery from such a disease process. The remarkable action of antibiotic agents on susceptible infections is reflected specifically by a return of body temperature toward normal. This correlation of therapy with symptomatic response has led to an insidious change in the approach of the physician to the febrile patient. It has become tempting to treat the fever with an antibiotic rather than engaging in the tedious business of first making a diagnosis. Recently, a confusing variety of chemotherapeutic combinations has been introduced which are said to have a "broader antimicrobial spectrum of activity". This tends to reassure the physician that such a preparation is more likely to cure a fever regardless of the cause. Indeed the era of the universal antipyretic seems near at hand. Perhaps we may witness the development of a single injection containing a broad-spectrum antibiotic, streptomycin, chloroquin, cortisone, and a nitrogen mustard! Such a marvel could then be utilized to abolish any fever, whether due to malaria, amebiasis, actinomycosis, tuberculosis, gram-positive and gram-negative bacteria, rickettsiae, large viruses, the lymphomas, or collagen disorders.

Evidently, it is important to consider the circumstances in which anti-bacterial mixtures are helpful and in which they are useless or may be harmful. The indications for specific mixtures are as follows:

(1) To provide suppressive action on two or more components of a particular infection. The familiar use of penicillin and streptomycin in peritonitis followng fecal contamination is a good example. Here gram-positive cocci are suppressed by penicillin and gram-negative rods by streptomycin.

(2) To cover various possibilities in a severe infection of unknown etiology when delay might prove costly. Meningitis and brain abscess following mastoiditis may be due to one of various organisms. Between the time a culture is taken and the laboratory makes a report, the patient may receive two or three antibiotics simultaneously. When the organism is identified, only the appropriate antibiotic need be retained.

(3) To reduce toxicity. Triple sulfonamides and a combination of streptomycin and dihydrostreptomycin represent this type of advantage.

(4) To delay emergence of resistant organisms. Note the combined use of streptomycin and isoniazid in tuberculosis.

(5) To produce a synergistic action on certain bacteria. Endocarditis due to the enterococcus rarely responds to either penicillin or streptomycin alone but is usually cured by the combination of the two.

In contrast to these clear-cut indications, certain disadvantages to the use of antibiotic mixtures must be emphasized:

(1) Inappropriate dose relationships. A popular combination of penicillin and streptomycin mixed in a vial contains 300,000 units of procaine penicillin and 0.5 or 1.0 gm. of streptomycin. In cases of over-whelming peritonitis it is advisable to administer a much larger ratio of penicillin to streptomycin.

(2) Multiple antigenicity. Every antibiotic is a potential allergen. The wider the variety of drugs employed the greater the likelihood of skin rash, urticaria, anaphylaxis, etc.

(3) Expense. Mixtures of drugs are inevitably more costly to the patient. Many

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antibiotic preparations are now combined with sulfonamides. This practice is almost never justified.

(4) Needless induction of resistant bacteria. It should always be remembered that the introduction of an antibiotic into a patient's blood stream does not merely treat a local infection but perfuses the whole body and affects the bacteria of the skin, nose, sinuses, mouth, and intestinal tract. Every unnecessary dose of an antibiotic hastens the day when more and more of these potentially pathogenic organisms become resistant to all of our presently useful drugs.

In summary, it is clear that antibiotic mixtures can become valuable therapeutic adjuncts but will never act as a panacea of infections. Their use calls not for facility with a prescription pad but for all the diagnostic skill and therapeutic critique of the well trained physician.

COUNT D. GIBSON, JR., M.D.

SOCIETIES

Richmond Academy of Medicine

At the March 23 meeting of the Academy, the papers presented were—

Coordinating Surgery for Pulmonary Tuberculosis with Modern Chemotherapy by Dr. Alfred M. Decker, and

Hirsuitism and Virilism by Dr. Herbert G. Langford.

Dr. Benjamin W. Rawles, Jr., is president of the Academy.

The Fairfax County Medical Society

Met on Thursday, April 8th, at the home of Dr. Nelson Podolnick in Falls Church, Virginia.

The speaker was Dr. Robert Lee, an Orthopedic Surgeon, who spoke on Orthopedics in General Practice.

Warwick-Newport News Society.

There was a joint meeting of this Society and The Peninsula Dental Society on May 11th at the Hotel Chamberlin, Old Point Comfort. A panel discussion was held by three members of the faculty of the School of Dentistry, Medical College of Virginia, on "Oral Manifestations of Systemic Diseases."

Dr. William A. Read is president of this Society and Dr. F. Ashton Carmines, secretary-treasurer.

The Tazewell County Medical Society

Held it regular bi-monthly meeting on April 21st at the River Jack Restaurant in North Tazewell, with the president, Dr. W. R. Strader, presiding. Dr. R. C. Neal, a member of the staff of the Bluefield Sanitarium, Bluefield, W. Va., spoke on "Fluid and Electrolyte Balance".

Dr. Mary Elizabeth Johnston is secretary of this society.

The Medical Society of Northern Virginia

Held its Spring meeting in Winchester on May the 13th, with Dr. E. L. Grubbs of Front Royal presiding. Case reports were presented by

Dr. A. L. Wilson—"Carcinoma of the Ovary of a 22 Year Old Girl";

Dr. George Smith—"Carcinoma of the Larynx"; and

Dr. Douglas Hill—"Pseudo-Anginal Syndrome".

The guest of the meeting was Dr. Harry G. Hull, Professor of Clinical Surgery, University of Maryland, School of Medicine, Baltimore, who spoke on "Tumors of the Neck".

The next meeting will be in Front Royal on August the 10th.

Alexandria Medical Society.

At the regular meeting on April 8th, the following officers were elected: President, Dr. Christopher J. Murphy, Jr.; vice-president, Dr. F. Preston Titus; and secretary, Dr. Thomas F. McGough. The Executive Board consists of the president, vice president, and secretary (ex officio), Dr. John Watson, Dr. Daniel Yuter and Dr. Haskins Ferrell, Jr.

Wise County Medical Society.

Following a dinner at the Norton Hotel, Norton,

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on April 14th, the meeting was called to order by the president, Dr. T. J. Tudor. The Society recommended that Dr. N. F. Hix, Wise, be asked to accept reappointment as County Medical Examiner and Dr. Francis S. Jones, Norton, was recommended for County Pathologist. A new advisory committee to the Community Blood Bank was appointed with Drs. Francis S. Jones, J. T. Phillips and C. E. P. Burgwyn as the members.

The advisory committee to the Woman's Auxiliary announced that it is recommending that the Auxiliary take an active part in organization and direction of a County Cancer Society.

Dr. Robert Jessee, County Health officer, discussed plans for the establishment of a Maternal-Child Health Clinic in Norton and the plan was approved unanimously.

Dr. Eugene Bene, Norton, gave an informal and informative talk on "Chest Pain".

LEO N. KIRCH, *Secretary*

Virginia Peninsula Academy of Medicine.

At the regular monthly meeting on April 1st at the Coca-Cola Building in Newport News, Dr. Robert Creadick, Associate Professor of Obstetrics and Gynecology at Duke University, was guest speaker.

NEWS

Calendar of Coming Events

VIRGINIA HEART ASSOCIATION—Hotel Jefferson, Richmond—June 13
AMERICAN MEDICAL ASSOCIATION—Annual Meeting—San Francisco, June 21-25
AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION—Washington, D. C., September 6-11
AMERICAN ASSOCIATION OF BLOOD BANKS—7th Annual Meeting—Shoreham Hotel, Washington, D. C., September 13-15
THE MEDICAL SOCIETY OF VIRGINIA—(Annual Meeting)—First Interstate Scientific Assembly—Shoreham Hotel, Washington, D. C., October 31-November 3

Inaugural Ceremony to Be Broadcast.

Virginia physicians who are not able to attend the A.M.A. meeting in San Francisco will be able to hear the inaugural ceremony at which Dr. Walter B. Martin, Norfolk, will become the Association's 108th President. The installation will be broadcast nationwide by radio on Tuesday night, June 22nd, and all physicians are urged to watch the radio listings in local papers for broadcast of the ABC program.

Have You Made Your Reservations?

From all indications, The Medical Society of Virginia can expect a record breaking registration for the First Interstate Scientific Assembly (Annual Meeting). We have been advised that the Shoreham (headquarters) is now sold out, and reservations are being referred to the Sheraton Park (formerly Wardman Park). The Sheraton is a beautiful hotel—one of Washington's finest—and is directly across the street from the Shoreham. The Society is fortunate to have secured 200 rooms at the Sheraton.

If you haven't yet made your reservations—do so now! This meeting, to be held from October 31-November 3, promises to be an historical event for both The Medical Society of Virginia and the Medical Society of the District of Columbia.

Dr. R. Finley Gayle, Jr.,

Richmond, has been named president-elect of the American Psychiatric Association. He will take office in 1955, succeeding Dr. Kenneth Appel of Philadelphia.

Reich Devices and Abrams-Type Machines Dangerous Frauds.

"Orgone energy" devices misbranded with curative claims were barred from interstate commerce by a permanent order issue in the Federal district court

at Portland, Maine. Those enjoined from distributing the devices are Dr. Wilhelm Reich and his wife, Ilse Ollendorff Reich, and the Wilhelm Reich Foundation, all of Rangeley, Maine. Models produced by Dr. Reich are the "Orgone Energy Accumulator", "Shooter Box", "Orgone Energy Blanket" and "Orgone Energy Funnel".

Thirteen electrical devices which have been widely distributed for the diagnosis and treatment of serious diseases were barred from shipment in interstate commerce by an injunction degree in the Federal district court at San Francisco. The names of the machines are as follows: Oscilloclast, Oscillotron, Regular Push Button Shortwave Oscilloclast, Sweep Oscillotron, Sinusoidal Four-in-One Shortwave Oscillotron, Galvanic Five-in-One Shortwave Oscillotron, Depoloaray, Depolatron, Depolaray Chair, Depolatron Chair, Depolaray Junior, Electropad, and New Depolaray Junior. These machines are products of the Electronic Medical Foundation of San Francisco, formerly the College of Electronic Medicine. It was set up by the late Dr. Albert Abrams, inventor of the machines, to perpetuate his electromedical theories.

The Department of Health, Education and Welfare of the Food and Drug Administration advises that several thousand of the Reich devices and the Abrams-type machines are now in the hands of practitioners who will continue to use them. The machines have been declared as dangerous frauds.

Dr. Hamner Twice Honored.

Dr. James L. Hamner, Mannboro, has been elected president of the State Board of Health, to fill the vacancy caused by the death of Dr. William Tate Graham. Dr. Samuel Kent was elected vice-president to succeed Dr. Hamner.

Three Lynchburg College alumni were recently honored by presentation of the Thomas Gibson Hobbs Memorial Awards, and one of these was Dr. Hamner.

Drs. Blankinship and Saunders Honored.

Dr. Rex Blankinship, medical director of Westbrook Sanitarium, Richmond, was chosen president of the National Association of Private Mental Hospitals at the recent meeting of the American Psychiatric Association in St. Louis.

Dr. John R. Saunders, associate resident physician at Westbrook, was named secretary of the national assembly of district branches of the Association.

Northern Virginia Clinical Assembly.

The Fifth Annual Assembly was held on April 25th from 10:00 A.M. to 5:00 P.M. The Magnolia Room of Hunting Towers in Alexandria served as the meeting-place.

As usual, the event was sponsored by the Alexandria Medical Society. The Committee consisted of Dr. John D. Hoyle (Chairman), Dr. Milton R. Stein, Dr. Alvin C. Wyman, Mrs. James M. Moss, and Mrs. William J. Weaver, Jr.

Members of the Faculty at the School of Medicine of the University of Virginia presented the following interesting and informative program:

Practical Application of Isotopes in Medical Practice—Kenneth R. Crispell, Assistant Professor of Internal Medicine; Bad Results of Antibiotic Therapy—Alto Edmund Feller, Professor of Microbiology; Coronary Diseases and Their Management —Julian Beckwith, Assistant Professor of Internal Medicine; Management of Disc Disease—Juan De Dios Martinez-Galindo, Associate Professor of Neurosurgery; Menopause—William Parson, Professor of Internal Medicine; Diagnosis and Treatment of the Precancerous Dermatoses—Edward P. Cawley, Professor of Dermatology; Perinatal Mortality—Panel Discussion: McLemore Birdsong, Associate Professor of Pediatrics; George Cooper, Jr., Associate Professor of Roentgenology; William N. Thornton, Professor of Obstetrics and Gynecology.

Lunch was served from 12:00 noon to 1:30 P.M. A social hour followed the close of the meeting at 5:00 P.M.

T. F. McGOUGH, M.D.
Secretary
Alexandria Medical Society

Dr. Carrington Williams,

Richmond, has been elected first vice-president of the Association of Surgeons of the Southern Railway System.

Hospital to Be Named for Dr. Williams.

The State's new 450 bed Negro hospital now under construction at the Medical College of Virginia will be named the Ennion G. Williams Hospital in honor of Virginia's first health commissioner. The late Dr. Williams served as health commissioner from 1908 until his death in 1931.

Now in the early stage of construction, the hospital will contain 250 beds in the tuberculosis divisions, including a 50 bed surgical-diagnostic unit,

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and 200 beds in its general hospital division for medicine, pediatrics and psychiatry.

Dr. Thomas S. Ely,

Jonesville, has been named by Governor Stanley as chairman of a Virginia veterans' committee to serve in the American-Korean Foundation campaign for funds. He is commander of the Virginia Chapter of the American Legion.

The Gill Memorial Eye, Ear and Throat Hospital

Recently completed it Twenty-Seventh Annual Spring Congress in ophthalmology and otolaryngology and the allied specialties. The faculty was composed of twenty-three guest speakers. There was an attendance of two hundred and seventy-five doctors representing forty-two states, Canada and one foreign country.

The Twenty-Eighth Annual Spring Congress will be held from April 4th through the 9th, 1954.

Course in Postgraduate Gastroenterology.

The National Gastroenterological Association announces that its Sixth Annual Course in Postgraduate Gastroenterology will be given at The Shoreham in Washington, D. C. on 28, 29, 30 October 1954. The Course will again be under the direction of co-chairmanship of Dr. Owen H. Wangensteen, Professor of Surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator and Dr. I. Snapper, Director of Medical Education, Beth-el Hospital, Brooklyn, N. Y., who will serve as medical co-ordinator. Drs. Wangensteen and Snapper will be assisted by a distinguished faculty selected from the medical schools and Walter Reed Army Hospital, whose presentations will cover all phases of gastorintestinal diseases and problems. The entire session on Friday, 30 October 1954 will be given at the Walter Reed Army Hospital.

For further information and enrollment write to the National Gastroenterological Association, Department GSJ, 33 West 60th Street, New York 23, N. Y.

Academy of Psychomatic Medicine.

The Program of the first annual meeting of the Academy is to be held at the Plaza Hotel in New York City on October 8-9, 1954, and will be devoted to Psychosomatic Aspects of Surgery. There will be contributed and invited papers on topics in various specialties. Those who are interested in presenting papers should write to Dr. Benjamin Raginsky, 376 Redfern Ave., Montreal, Canada, stating their special interest.

The Academy of Psychosomatic Medicine is still receiving applications for fellowship and associateships, according to Dr. Ethan Allan Brown, Secretary, 75 Bay State Road, Boston 15, Mass. New fellows will be inducted into the Academy at the October Meeting in New York City, at which time certificates of membership will be presented.

Associated in Orthopedic Surgery.

Drs. Duncan and Hollins of Norfolk, announce the association of Dr. John S. Thiemeyer, Jr., at 343 Wainwright Building, 229 West Bute Street, that city. Their practice will be limited to Orthopedic Surgery.

William T. Sanger, Ph.D.,

Has become the second president emeritus in the history of the National Society for Crippled Children and Adults, the Easter Seal Society. One of the nation's most distinguished medical educators, Dr. Sanger is immediate past president of the National Society and for 26 years has been head of the Medical College of Virginia. He was elected to his new honorary post by the unanimous vote of the Easter Seal Society's Board of Trustees, which met in Chicago's Palmer House April 23.

The first President Emeritus of the National Society was the late Col. Elbridge W. Palmer, of Kingsport, Tenn., who served as president for nine years until 1949. Colonel Palmer died in New York last November 18.

Lewis-Gale Hospital Annual Dinner.

The Annual Dinner meeting of the Lewis-Gale Hospital was held on April 14 at the Hotel Roanoke. About two hundred members of the hospital group and their physician guests heard Dr. E. H. Rynearson, Chief of Metabolic Diseases of the Mayo Clinic speak on "Syndromes Associated with Tumors or Hypertrophy of the Adrenal Gland: the Results of Total or Subtotal Adrenalectomy".

The Duke Medical Post-Graduate Course

Will be given at Duke Hospital, Durham, N. C., June 14, 15, 16 and 17. An excellent program has been arranged which will furnish much of special interest to the general practitioner. Ward Rounds and Visits to the Clinics will be available each day. The speakers will be members of the Duke Faculty.

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The registration fee is $25.00. Rooms are available in the University Graduate Dormitories and meals may be obtained in the Graduate Dormitory or in the Oak Room in the University Union.

Dr. Hudnall Honored.

Dr. R. L. Hudnall, Lilian, was guest of honor at a celebration on May 4th which marked his golden anniversary as a country doctor who has practiced for fifty years in Northumberland County. More than 500 of his friends were present and he was presented with a cash gift. He has missed only one day's practice and that was in 1930 when a blizzard kept him snowbound all day before the roads were cleared.

American Surgical Society.

Dr. John H. Gibbon, Jr., director of surgical research at the University of Pennsylvania, is the new president of this Society, having been elected at the annual meeting held in Cleveland the last of April.

Southern Pediatric Seminar.

The 34th annual session of the Southern Pediatric Seminar will be held in Saluda, N. C., July 12th-31st. This is a course in internal medicine, obstetrics and gynecology, and pediatrics, with the newest methods of diagnosis, prevention and treatment. The lecturers are among the finest medical authorities in the South, and they will stress the solution of ordinary daily problems in the most modern, scientific and satisfactory way. Credit for attendance is accepted by the American Academy of General Practice and the only expense is the registration fee of $25.00 per week. Registration for one week is accepted.

For information and registration, address M. A. Owings, secretary-treasurer, Saluda, N. C.

Dr. Franklin S. Kincheloe,

Recently of Asheboro, N. C., has become a staff physician of the Richmond Health Department, with duties to be at Pine Camp Hospital and the Diagnostic Chest Clinic.

Inter-Society Cytology Council.

The second annual meeting of the Council will be in Boston, at the Statler Hotel, November 12 and 13, 1954. Those having material to present are invited to submit three copies of the title and an informative abstract of not more than 200 words to Dr. John B. Graham, Chairman of the Program Committee, 32 Fruit Street, Boston, Massachusetts, before July 15, 1954.

The authors of papers, selected for presentation, will be notified by September 30, 1954.

You are urged to make reservations directly with the Reservations Manager, Statler Hotel, Boston, Massachusetts.

Registration will be open to everyone interested in Cytology. Registration fee for physicians is $5.00; for cytologic-technologists, technicians and others, $2.00. Medical students, internes and residents will be admitted without charge.

An informal cocktail party and dinner will be held Friday night, November 12. The annual business meeting will follow the luncheon at 12:30 Saturday, November 13.

For additional information please contact the Secretary-Treasurer, Inter-Society Cytology Council, 634 North Grand Blvd., St. Louis, Missouri.

For Sale—

40-bed well equipped, small town hospital. Address Physician's Hospital, Incorporated, Warrenton, Virginia. (*Adv.*)

Doctor's Office—

Ideal location outside of Washington in expanding community of Alexandria, Virginia. Complete 5-room house available for use as an office in area needing services of a physician. Owners willing to assist Doctor to get started. Telephone Mr. Charles Gerstein for appointment—TE-6-9378—or write him at 13 East Myrtle Avenue, Alexandria, Virginia. (*Adv.*)

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OBITUARIES

Dr. Alexander Emmett Turman,

Prominent Richmond physician, died May 10th, following a long illness. He was eighty-five years of age and a graduate of the Medical College of Virginia in 1893. After his graduation, Dr. Turman served for eight years at the Virginia State Penitentiary Farm as its first surgeon, after which time he located in Richmond. He was a member of several fraternal and medical organizations and the Richmond Rotary Club. Dr. Turman was a Life Member of The Medical Society of Virginia, having joined in 1894. A daughter, a sister and a brother, Dr. John W. Turman, also of Richmond, survive him.

Dr. John Hampton Hare,

Warsaw, died April 19th at the age of sixty-nine. He was a graduate of the former Maryland Medical College in 1905. Dr. Hare was formerly a member of The Medical Society of Virginia. His wife and four children survive him.

Dr. Frederick Pilcher,

A native of Petersburg, died May 6th at his home in Calgary, Alberta, Canada. He was forty-seven years of age and a graduate in medicine from the University of Virginia in 1931. His wife and a son survive him.

Resolutions on Dr. Leo

Dr. Louis S. Leo was born in New Haven, Connecticut, on March 16, 1904. His family moved to Norfolk, Virginia, shortly afterwards and he attended the local grammar schools and high school. He received his Bachelor of Science degree from the University of Richmond and in 1927 received his M.D. degree from the Medical College of Virginia. He served his internship in St. Elizabeth's Hospital, Covington, Kentucky and in Mercy Hospital, Chicago. After completing a residency in E.E.N.T. in the Illinois Eye and Ear Infirmary, Chicago, he opened his office for the practice of his specialty in Houghton, Michigan in 1929. However, his desire to improve his knowledge and learn newer techniques forced him to leave his large practice and in 1932, he spent a year in Berlin and Vienna taking post-graduate courses in Eye, Ear, Nose and Throat. Upon his return to his practice, he was appointed an instructor at the University of Michigan Medical School and served in that capacity until 1940.

Although he had a flourishing practice in Michigan, Dr. Leo had frequently expressed a desire to return to Norfolk. In this, he had the moral support of his wife, who was also a native of Norfoik. In 1940, he made the decision to return to his adopted home and that year, he opened his office in the Wainwright Building. Having received flight instruction and a license to pilot a plane while in Michigan, shortly after the outbreak of World War II, Louis Leo volunteered for duty with the Army Air Forces. He served for four years as a flight surgeon, serving most of the time in the European Theatre. While on a flight with his squadron on a bombing mission over Europe, he received injuries for which he was awarded the Purple Heart. He was discharged in 1946 with the rank of Lt. Colonel and returned to Norfolk to resume his practice.

His devotion to his practice plus his thorough knowledge and unusual skills soon reflected itself by the rapid growth of his practice. His interest in plastic surgery resulted in greater achievements and his skilled accomplishments in this field were unsurpassed. His original investigative studies in the treatment of retinitis pigmentosa won for him well-deserved praise. He was a Fellow of the American College of Surgeons, a member of the local and state medical societies as well as of the Tidewater Virginia Ophthalmological Associations. He was on the Attending Staffs of De Paul, Norfolk General and Leigh Memorial Hospitals.

In addition to his practice, Dr. Leo found time to associate himself with many civic organizations. He was a past-president of the Talbot Park Civic League, a member of the Norfolk Association of Commerce, Torch Club, and he was a Mason. He was also a talented sculptor and painter.

On March 17, 1954, several hours after sustaining a coronary thrombosis, Dr. Louis S. Leo passed to a better world. He is survived by his parents, his wife, two daughters, and one grandson.

BE IT RESOLVED that on this day, April 5, 1954, these resolutions on Dr. Louis S. Leo be incorporated into the records of the Norfolk County Medical Society and a copy be sent to his family.

BERNARD LIDMAN, M.D.
C. C. COOLEY, M.D.
M. R. WHITEHILL, M.D.
ALFRED L. KRUGER, M.D., *Chairman.*